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Production of *Dictyostelium discoideum* Hybrid Type Enzyme SteelyA in the Diatom *Phaeodactylum tricornutum*

Nicolas Sene, Basanta Lamichhane, Sarah-Eve Gélinas, Alexandre Custeau, Natacha Merindol, Fatma Meddeb-Mouelhi and Isabel Desgagné-Penix *

Department of Biochemistry, Chemistry, Physics and Forensic Science, Université du Québec à Trois-Rivières, Trois-Rivières, QC G8Z 4M3, Canada; nicolas.sene@uqtr.ca (N.S.); basanta.lamichhane@uqtr.ca (B.L.); sarah-eve.gelinas@uqtr.ca (S.-E.G.); alexandre.custeau@uqtr.ca (A.C.); fatma.meddeb@uqtr.ca (F.M.-M.)

* Correspondence: isabel.desgagne-penix@uqtr.ca

Abstract

The bioproduction of high-value molecules offers a sustainable and cost-effective alternative to traditional extraction and chemical synthesis, particularly for complex metabolites like cannabinoids (CBs), which have therapeutic potential for neurodegenerative diseases. The marine diatom *Phaeodactylum tricornutum* presents a promising chassis for CB biosynthesis due to its high lipid content, essential building blocks to biosynthesize CBs. In this study, we explored the feasibility of producing olivetolic acid (OA), the key CB precursor, using a hybrid-type polyketide synthase, SteelyA, from *Dictyostelium discoideum*. Unlike the native *Cannabis sativa* enzymes—tetraketide synthase and olivetolic acid cyclase—which exhibit low productivity and stability in diatoms, SteelyA was expected to offer an alternative biosynthetic route. Heterologous production in *P. tricornutum* resulted in a C-terminal fragment of the SteelyA enzyme, suggesting partial expression or processing of the very high-molecular-weight (352 kDa) SteelyA protein over six months without affecting cellular growth. However, HPLC-MS analysis did not detect intracellular OA or its derivatives in vivo and in vitro, suggesting enzymatic inactivity or metabolic limitations. These negative findings highlight the need for further investigation into the metabolic and proteomic requirements for CB precursor biosynthesis in diatoms, guiding future optimization strategies for sustainable cannabinoid production.

Keywords: metabolic engineering; cannabinoids; cannabinoid precursor; microalgae; diatom bioengineering; heterologous production; high-molecular-weight protein; hybrid polyketide synthase; olivetolic acid; *Phaeodactylum tricornutum*; secondary metabolite biosynthesis; SteelyA

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1. Introduction

Cannabinoids (CBs), including Δ9-tetrahydrocannabinol (THC) and cannabidiol (CBD), are coveted for the effects stemming from their interaction with the human endocannabinoid system [1,2]. They are naturally produced in the glandular trichomes of *Cannabis* plants. Tetraketide synthase (TKS) and olivetolic acid cyclase (OAC) from hexanoyl-CoA and malonyl-CoA lead to the biosynthesis of olivetolic acid (OA), a common intermediate of most cannabinoids [3]. The current cannabinoid supply relies on the extraction from cultivated *Cannabis sativa*; however, the cost of cultivation and difficult separation processes led to the search for alternatives [4,5].

In recent years, bioengineering has emerged as a powerful alternative to conventional extraction and chemical synthesis for obtaining a variety of valuable compounds. Based on using and enhancing natural reactions to produce complex molecules, bioproduction converts the need for costly, energy-intensive, and low-yield extraction processes into more accessible organism cultivation and metabolite purification [6–8]. Biofuels, solvents, pharmaceuticals, and nutraceuticals are now abundantly produced using bioengineering [9–11]. Achieving the bioproduction of molecules of diverse nature and size demands mastery of knowledge and techniques for each suitable model organism.

With an endogenously high lipid content, the microalgae *Phaeodactylum tricornutum* is a prominent choice as a green platform to produce biofuels, nutraceuticals, and even pharmaceuticals [12–17]. The toolbox and data available to work on the diatom are rapidly growing and are therefore gaining increasing interest in the bioproduction industry [18]. As it naturally produces malonyl-CoA and is predicted to produce hexanoyl-CoA, two substrates involved in the biosynthesis of fatty acids, it has been tested as a heterologous host to support the synthesis of cannabinoids [12,16,19–21]. The in vitro production of cannabigerolic acid by enzymatic assay using protein extracts has been successfully achieved in *P. tricornutum* using geranyl pyrophosphate and OA [12]. However, the heterologous expression of *C. sativa* tetraketide synthase and olivetolic acid cyclase cassettes to yield OA showed limited productivity and stability in the diatom expression systems [16]. As the metabolism of *P. tricornutum* is still being actively investigated, it is possible that the 3,5,7-trioxododecanoyl-CoA intermediate produced by the *CsTKS* enzyme is either unstable or channeled in other pathways instead of serving as a substrate for the *CsOAC*. Thus, alternative enzymes, notably from other organisms, have been investigated to circumvent this necessary step of the cannabinoid biosynthesis pathway.

One potential solution is the utilization of enzymes from *Dictyostelium discoideum*, a unicellular eukaryote that undergoes multicellular aggregation under nutrient deprivation, forming a fruiting body-like structure reminiscent of fungal development [22,23]. During this differentiation process, *D. discoideum* produces SteelyA, a hybrid enzyme combining features of type I fatty acid synthases and type III polyketide synthases. In its native host, SteelyA catalyzes the biosynthesis of 4-methyl-5-pentylbenzene-1,3-diol (MPBD) and methyl-olivetol from acyl-CoA precursors (Figure 1) [24,25]. Interestingly, deletion of the enzyme's methyltransferase domain results in the production of olivetol, the direct precursor to OA and other cannabinoids [25–27]. When produced heterologously in *Saccharomyces cerevisiae*, SteelyA primarily produces methyl-olivetol [28] (Figure 1), with additional side products such as acylpyrones when two malonyl-CoA moieties are incorporated into the reaction. As SteelyA is the only hybrid polyketide synthase and fatty acid synthase identified to have produced the modified cannabinoid precursor methyl-olivetol in heterologous organisms, it stands out for genetic engineering in diatoms.

To address the limitations of TKS/OAC expression and assess an alternative strategy for OA biosynthesis, we investigated the heterologous production of SteelyA in *P. tricornutum*. The presence of olivetolic acid's precursor in the diatom's metabolism and the success in producing methyl-olivetol in yeast build a promising strategy to produce olivetol analogs in *P. tricornutum.* This study represents a significant milestone in diatom-based metabolic engineering, as it involves the production of the largest heterologous protein ever produced in *P. tricornutum* to date, a 352 kDa multifunctional enzyme. We inserted a genetic cassette containing the *steelyA* gene into *P. tricornutum* by conjugation [29] and evaluated both the production and enzymatic activity of the produced protein. By assessing the feasibility of producing such a large polyketide synthase/fatty acid synthase hybrid, this work provides new insights into the potential of *P. tricornutum* as a chassis for the biosynthesis of complex metabolites, expanding its applications in synthetic biology and metabolic engineering.

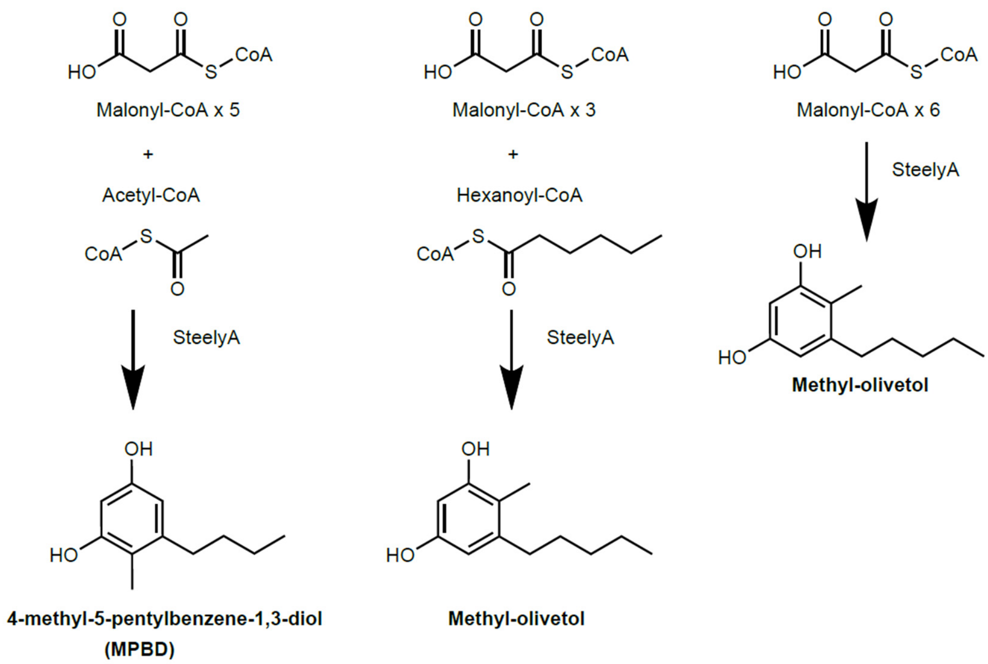

Figure 1. Proposed reactions catalyzed by the SteelyA enzyme. Bolded molecules indicate products observed from SteelyA activity. Left reaction: The native reaction of SteelyA in *Dictyostelium discoideum*, as reported by [27], where SteelyA utilizes acetyl-CoA and five malonyl-CoA molecules to produce MPBD. Middle reaction: The reaction described by [25] in *D. discoideum* showing that SteelyA can use a hexanoyl-CoA starter unit along with three malonyl-CoA molecules to generate methyl-olivetol. Right reaction: represents the reaction observed by heterologous production of SteelyA in *Saccharomyces cerevisiae*, as described by [28].

2. Materials and Methods

2.1. Microbial Strains and Growth Conditions

E. coli strains 10β (New England Biolab®, Ipswich, MA, USA) and Epi300 (TransforMax Epi300 Biosearch™ Technologies, Novato, CA, USA) were grown in Luria Broth (LB) supplemented with chloramphenicol (35 $\mu g \cdot mL^{-1}$) (Thermo Fisher Scientific, Waltham, MA, USA) when harboring the p*Pt*GE30 plasmid and gentamicin (50 $\mu g \cdot mL^{-1}$) (Thermo Fisher Scientific, Waltham, MA, USA) when containing the pTA-MOB plasmid. All these strains were grown at 37 °C and under agitation at 220 rpm when in liquid culture. *P. tricornutum* strain (CCAP 1055/1, Culture Collection of Algae and Protozoa) was grown in L1 medium [30] at 18 °C under white lights (75 $\mu E\ m^{-2}\ s^{-1}$) at 130 rpm with a photoperiod of 16 h of light. Each strain containing the p*Pt*GE30 backbone was grown with 50 $\mu g \cdot mL^{-1}$ of zeocin (Invitrogen, Waltham, MA, USA). Each culture carried under antibiotic selection has been maintained in those conditions until experimentation.

2.2. Plasmid Constructions

For the expression plasmid constructs, two parts of the *steelyA* cassettes were synthesized by Genewiz® from Azenta Life Sciences (Waltham, MA, USA) in fragments 1MN and 1Q using various primers (Appendix A—Tables A1 and A2) and assembled with the p*Pt*GE30 vector (named EV hereafter) by Gibson assembly using the NEBuilder® HiFi DNA Assembly Bundle for Large Fragments (New England Biolabs, Ipswich, MA, USA) and then transformed into the *E. coli* 10β strain. The final assembled construct contains a *Sh Ble* bleomycin resistance gene used for the selection, a *highly abundant secreted protein 1*

(*Hasp1*) promoter, and an *FcpA* terminator used to drive the expression of the *steelyA* gene from the patent [28]. The *Hasp1* promoter has been selected as it has a strong stationary expression, and it was inferred that the production of the protein could be very slow due to its unusual size and could require the strain to remain in the stationary phase to permit sufficient protein accumulation for detection and extraction. A myc tag was introduced into the C-terminal of the *steelyA* gene. Plasmid DNA sequence integrity was verified by Next Generation Sequencing (NGS) (Appendix A—Table A2).

2.3. *Phaeodactylum tricornutum* Conjugation and Screening

To introduce the *steelyA* constructs into *P. tricornutum*, each plasmid was transformed into the *E. coli* Epi 300 strain with the pTA-MOB plasmid. Conjugation was performed as described in [31], following exactly the steps described in [12] up to the final liquid culture of the transconjugants in L1 with zeocin.

Transconjugants were restreaked on a square plate and left to grow for seven more days. Colonies were then taken using a Fisherbrand® Loop from selective plates and then used to inoculate 150 µL of autoclaved deionized water. The cells were mixed by pipetting and vortexing for 30 s. Samples were heated at 95 °C for 12 min and vortexed a second time before being centrifuged at 13,700 rpm at 4 °C for 1 min. The supernatant was then transferred to a new Eppendorf tube. A volume of 5 µL supernatant was used for PCR reactions and followed by the Taq polymerase protocol for amplification, and then migrated by agarose electrophoresis.

2.4. *Growth Kinetic Strains and Growth Conditions*

Each *P. tricornutum* PCR-positive transconjugant was cultured in triplicate for 21 days in L1 medium with zeocin. Every two days, 250 µL of cell culture was used to measure the OD at 730 nm using a black Greiner microplate at the Synergy H1 BioTek microplate reader (Agilent, Santa Clara, CA, USA). Curves were obtained using GraphPad Prism software (Ver, 10.3.0.507). A *t*-test was performed using a Compare Groups of Growth Curves (CGGC) permutation test from Walter and Eliza Hall Institute of Medical Research, with 10,000 permutations [32].

2.5. *Plasmid Rescue*

To extract plasmid DNA from *P. tricornutum* transconjugants, 5 mL of *P. tricornutum* culture at day 7 was pelleted by centrifugation at $4000\times g$ for 10 min. The cell pellets were resuspended in 235 µL of PDL1 Large Plasmid Extraction Kit with 5 µL lysozymes ($100\ mg\cdot mL^{-1}$) and 5 µL of hemicellulase ($25\ mg\cdot mL^{-1}$). The mixed solutions were incubated at 37 °C for 30 min, then 250 µL of PDL2 solution was added and mixed by inverting five to ten times at room temperature. The lysed cells were neutralized by the addition of 375 µL of PDL3 buffer, mixed by inversion five to ten times, and incubated for 2 min at room temperature. The solution mixture was then centrifuged for 3 min on a microcentrifuge at maximal speed at room temperature. The manufacturing protocol of the Large Plasmid Extraction Kit (Geneaid™, New Taipei City, Taiwan) was followed, starting from step 4 until elution in 50 µL of elution buffer preheated at 80 °C. DNA concentrations were measured using the N60/N50 Implen NanoPhotometer®. Purified DNA plasmid was further used for transformation in *E. coli* 10β chemicompetent cells following NEB protocol. Colonies were selected on LB agar with chloramphenicol and then put in liquid LB with chloramphenicol overnight. DNA was extracted using the Large Plasmid Extraction Kit (Geneaid™, New Taipei City, Taiwan), and then the concentration was measured at the N60/N50 NanoPhotometer® (Implen, Munich, Germany). The DNA sample was sent for NGS.

2.6. Western Blot Analysis

For each clone, a 50 mL culture was left to grow for 21 days and was then pelleted at 4000× *g* for 1 h at 4 °C. The supernatant was removed, and the pellets were weighed. Cell pellets were then resuspended in cell lysis buffer (SDS 0.75 mM, glycerol 10%, Tris-HCl pH 7.2 51.4 mM, EDTA 0.02 mM, urea 8 M) with a ratio of 2 μL per mg of pellet. A volume of 50 μL of PMSF and 5 μL of protein inhibitor cocktail per sample was added before protein extraction. Proteins were then extracted by sonication (amplitude 35%, ON time 15 s, OFF 30 s, run time 2 min). An aliquot of 500 μL of total protein extract was taken at this step. The rest of the protein solution was centrifuged at 15,000× *g* at 4 °C for 30 min before transferring the supernatant into a new tube. This step was repeated twice. The soluble protein fraction was quantified using the Bio-Rad DC protein assay reagent package. A 50 μg of total soluble protein, 5 μL of total protein fraction, and 5 μL of Invitrogen™ HiMark™ Pre-stained Protein Standard (Fisher Scientific, Waltham, MA, USA) were loaded on a SurePage Bris-Tris gel 4–12% (GenScript, Piscataway, NJ, USA). Protein migration was performed at 80 V for 25 min, then at 120 V for 2 h 45 min. The 0.2 μm polyvinylidene fluoride (PVDF) membrane was first activated in methanol and equilibrated in transfer buffer (0.6% Tris, 2.88% Glycine, 0.01% SDS, 20% methanol). Protein transfer was performed on ice using a wet transfer system at 120 V for 1 h 50 min. Following transfer, the membrane was blocked using 5% milk prepared in TBST (Tris Buffer Saline with 0.1% Tween 20) at room temperature for 2 h. The membrane was then washed three times with TBST for 10 min each and incubated overnight at 4 °C with anti-myc tag monoclonal antibody from EMD Millipore (dilution 1:500) in 5% milk. The membrane was again washed in TBST and then incubated for 1 h (dilution 1:10,000) in 5% milk of Immun-Star Goat Anti-Rabbit (GAR)-HRP from Bio-Rad (Bio-Rad, Hercules, CA, USA). Finally, the membrane was washed three more times with TBST and then dipped in Clarity Max Western ECL Substrate-Luminol solution from Bio-Rad before revelation. Total protein transferred onto the membrane was visualized using the Ponceau Red staining by incubating the membrane for one day at room temperature and then rinsing with distilled water. The images taken for protein detection, Luminol and Ponceau Red, were acquired using the ChemiDoc Imaging System with Image Lab™ Software (Ver 3.0.1),Bio-Rad, Hercules, CA, USA).

2.7. Phaeodactylum tricornutum Metabolite Extraction

For each sample, after 21 days of growth, 10 mL of culture was centrifuged at 4000× *g* for 50 min. Approximately 90 mg of cell pellets were obtained and resuspended in 200 μL of mobile phase (i.e., MilliQ water and methanol, both containing 0.1% formic acid (30:70)) and stored at −80 °C. Upon analysis, the sample was centrifuged at 4000× *g* for 3 min. An aliquot was diluted 50-fold in the same mobile phase mentioned above.

2.8. SteelyA In Vitro Enzymatic Assay

The enzymatic assay was performed in triplicate using 14 μg of total soluble protein extract in a 100 μL volume reaction in the presence of PBS 1X, DTT 5 mM, malonyl-CoA 0.75 mM, hexanoyl-CoA 0.24 mM, and repeated at least three times. The enzymatic reaction was incubated for 16 h at 22 °C and stopped using 10 μL of TCA 20%. A first extraction was performed by adding 300 μL ethyl acetate to the reaction mix. The organic phase was taken and filtered using Agilent Captiva Econofilter polytetrafluoroethylene (PTFE) 13 mm 0.2 μm. The aqueous phase of the enzymatic reaction was diluted in 300 μL of methanol and filtered too. All samples were dried in a Thermo Scientific SPD1010 Speedvac concentrator and then resuspended in 100 μL methanol prior to the HPLC-MS analysis.

2.9. HPLC-MS Analysis

Malonyl-CoA and hexanoyl-CoA authentic standards were purchased from Millipore Sigma Canada Ltd. (Oakville, ON, Canada), while the olivetolic acid and olivetol standards were purchased from Santa Cruz biotechnologies (Dallas, TX, USA).

Metabolite detection was performed using high-performance liquid chromatography (Agilent, 1260 Infinity II) coupled to mass spectrometry (Agilent, MSD iQ). Metabolite separation was performed on an InfinityLab Poroshell 120 EC-C18 (2.1 × 50 mm, 2.7 µm) analytical column equipped with an Agilent EC-C18 (4.6 × 5 mm, 2.7 µm) guard column maintained at 30 °C. An injection volume of 5 µL was set. The flow was set at 0.5 mL · min^{-1} with an elution program as follows: 0 min, 30% A; 7.0 min, 0% A; 12.0 to 20.1 min, 30% A. The MS source parameters were set as follows: Gas temperature: 220 °C, Gas flow: 8.0 mL · min^{-1}, Nebulizer (psi): 55. Sample analyses were acquired in Scan mode in ESI+ and ESI− between m/z 100 to 500 with a fragmentation voltage of 135 V. Data were acquired using Agilent OpenLab CDC Acquisition (version 2) and Agilent OpenLab CDC Data Analysis (version 2.7) software was used for data acquisition and processing, respectively. A set of m/z for target compounds was analyzed (Table 1).

Table 1. Targeted compounds and their corresponding m/z values in positive ion mode or LC-MS analysis.

Compound Name	Verified m/z in M + H+
Triketide acyl pyrone (=4-hydroxy-6-propyl-pyran-2-one)	156
Olivetol	181
Triketide pyrone	182
Methyl olivetol and MPBD (4-methyl-5-pentylbenzene-1,3-diol)	195
Tetraketide acyl pyrone (=4-hydroxy-6-(2-oxo-pentyl)-pyran-2-one)	196
Olivetolic acid	225
Tetraketide pyrone	225
Naringenin chalcone	273

3. Results

3.1. Engineering *P. tricornutum* Strains to Produce SteelyA and Screening of Strains

To heterologously produce the *D. discoideum* polyketide synthase SteelyA in *P. tricornutum*, we constructed the expression episomal vector pSteely (Figure 2) using p*Pt*GE30 (EV). The vector harbored the *steelyA* coding sequence of 9441 bp under the control of the native constitutive *Hasp1* promoter, with the *FcpA* as a terminator and a C-terminal *myc* tag for protein detection (Figure 2). Plasmid construction was achieved via Gibson assembly using six primer sets (Appendix A—Table A1) and subsequently transformed into *E. coli*. Five SteelyA transformants and one EV were selected for *E. coli*-mediated conjugation with *P. tricornutum*.

Following conjugation, transconjugants were selected on L1 agar plates supplemented with zeocin. After two weeks, 36 colonies emerged, of which 15 were randomly selected for colony PCR to verify plasmid integration (Appendix A—Figure A1). Positive clones underwent plasmid rescue, and DNA integrity was confirmed by next-generation sequencing (Appendix A—Table A2). Sequencing analysis revealed varying degrees of mutations among the transconjugants. We retained three transconjugants for further study: pSteelyA-1, which contained a 129 bp insertion in the EV backbone but no mutation in *steelyA*; pSteelyA-2, which exhibited two 129 bp and a 563 bp insertion, a 129 deletion in a repetitive backbone region, and a silent mutation in *steelyA*; and pSteelyA-3, which carried an alanine-to-aspartic acid substitution in the methyltransferase domain, a methionine-to-isoleucine substitution, and a 984 bp deletion in the vector backbone (Appendix A—Table A2).

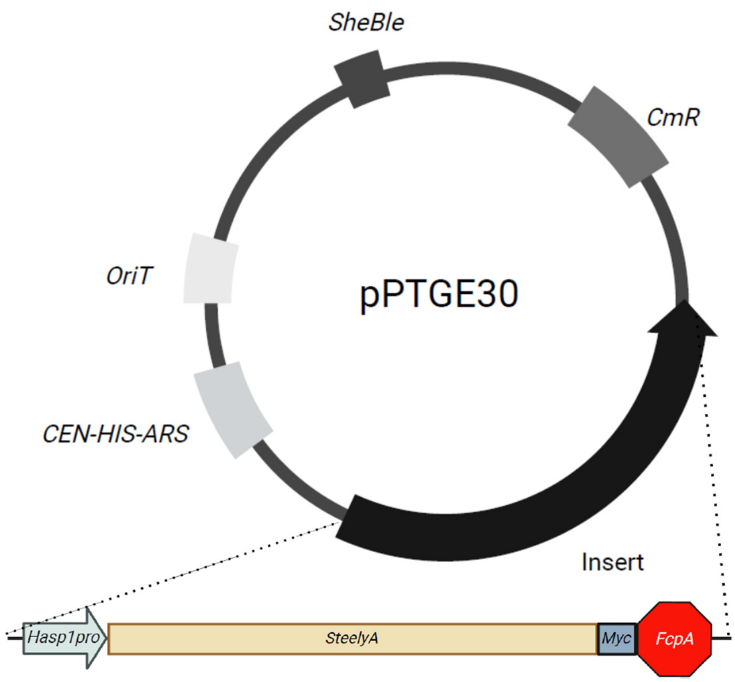

Figure 2. Schematic representation of the construction of the episomal plasmid pSteelyA. The p*Pt*GE30 plasmid, referred to as the Empty Vector (EV), is 16,015 bp in length. The inserted cassette consists of the *SteelyA* coding sequence (brown) under the control of the native *highly abundant secreted protein 1* (*Hasp1*) promoter (light blue). The sequence is tagged with a *Myc* marker (dark blue) and includes a fucoxanthin-chlorophyll binding protein A (*FcpA*) terminator (red). The insertion cassette is 10,174 bp long, resulting in the pSteely plasmid with a total length of 26,189 bp. Abbreviations: *CEN-HIS-ARS*, centromere-histidine-autonomously replicating sequence region; *OriT*, origin of transfer; *ShBle* zeocin resistance gene; *CmR*, chloramphenicol resistance gene.

The three selected transconjugants, pSteelyA-1, pSteelyA-2, and pSteelyA-3, along with the EV control, were cultured for 21 days, and their growth was monitored by measuring optical density at 730 nm. No significant differences in growth were observed among the transconjugants or between the transconjugants and the EV control (Figure 3A), indicating that the presence of the large plasmid (26,190 pb) did not adversely affect cell proliferation. However, microscopic analysis revealed a distinct morphological difference, with pSteelyA-expressing transconjugants exhibiting a shorter cell phenotype compared to the EV control, with a significant reduction in cell line length; however, no changes in width (Figure 3B,C and Appendix A—Figure A2).

3.2. SteelyA Production and Activity

To assess SteelyA production, we performed a Western blot analysis on total protein extracts and soluble fractions of three transconjugants six months after conjugation (Figure 4). A band is observable around 40 kDa in the total fraction of samples pSteelyA-2 and pSteelyA-3 and in the soluble fraction of all samples. The Ponceau Red reveals an equivalent load of all the soluble fraction samples, but a variable content of protein in 5 µL of the total fraction between each sample. It shows the band at 40 kDA, and an additional band around 55 kDa is visible in all SteelyA samples except for the pSteelyA-1 total fraction.

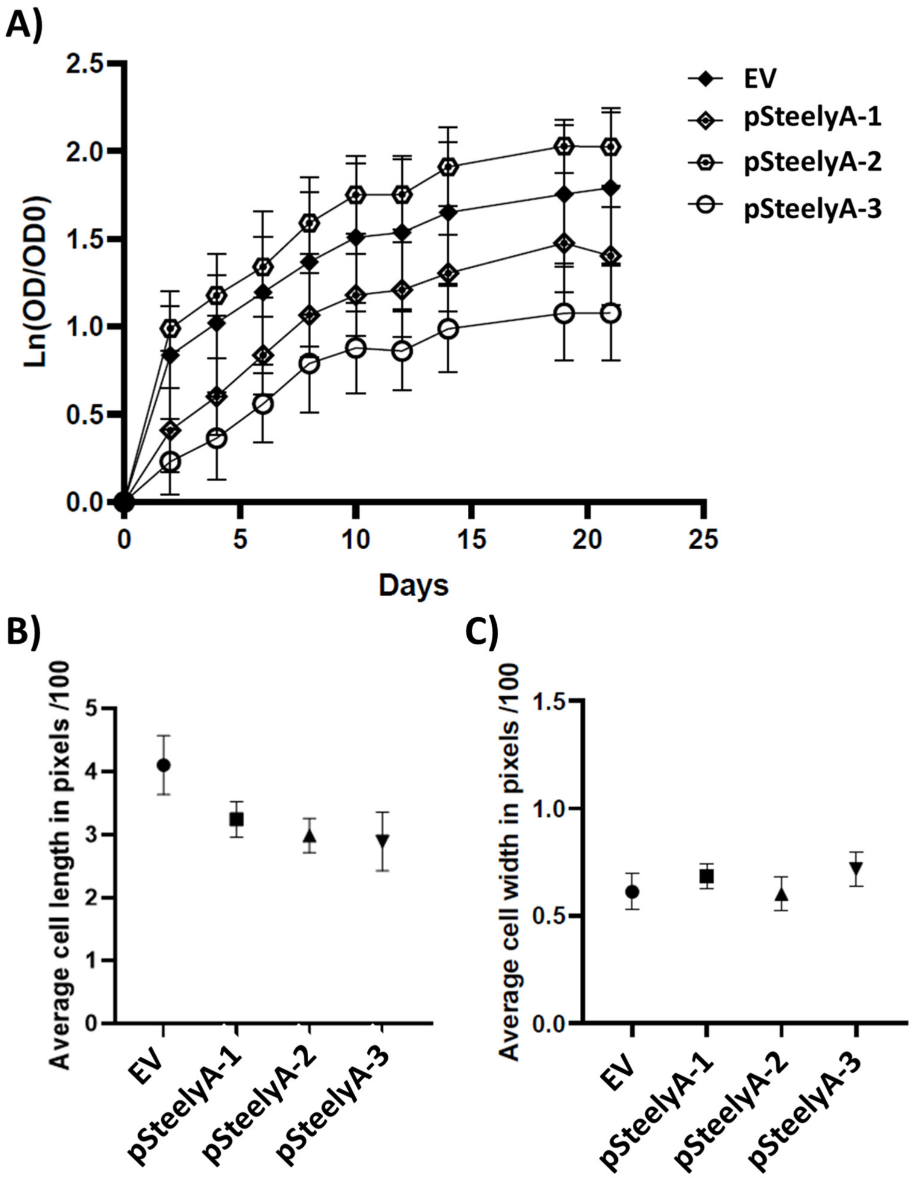

Figure 3. Growth and morphological analysis of *P. tricornutum* SteelyA and empty vector (EV) control transconjugant cell lines. (**A**) Growth curves of SteelyA transconjugants and EV control cultured in L1 at 18 °C. Optical density (OD) at 730 nm was monitored for 21 days. Data represent the mean of three biological replicates, with error bars indicating standard deviation. *t*-test, $p < 0.05$. Part (**B**) represents the length of SteelyA transconjugant cell lines (different symbols have been used to ease the distinction between samples; circle is EV, square is pSteely-1, triangle is pSteely-2 and reverse-triangle is pSteely-3). Part (**C**) represents the width of SteelyA transconjugant cell lines. Aligned dot plot of cell length and width in pixels. ($n \leq 5$ cells per condition).

To evaluate SteelyA enzymatic activity in vitro, total protein extracts were incubated with hexanoyl-CoA and malonyl-CoA under varying reaction conditions, including different pH levels (7, 7.5 and 8), temperatures (22 °C and 25 °C), and buffer systems (HEPES and Tris). LC-MS analysis of reaction products revealed no detectable levels of the expected compounds (m/z 100–500 and Table 1) in any transconjugants compared to the EV control (Figure 5). Similarly, no target metabolites from Table 1 were identified in total cell extracts under the same analytical conditions. These results suggest that despite successful expression and accumulation, SteelyA either lacked enzymatic activity or required additional factors for functional catalysis in *P. tricornutum*.

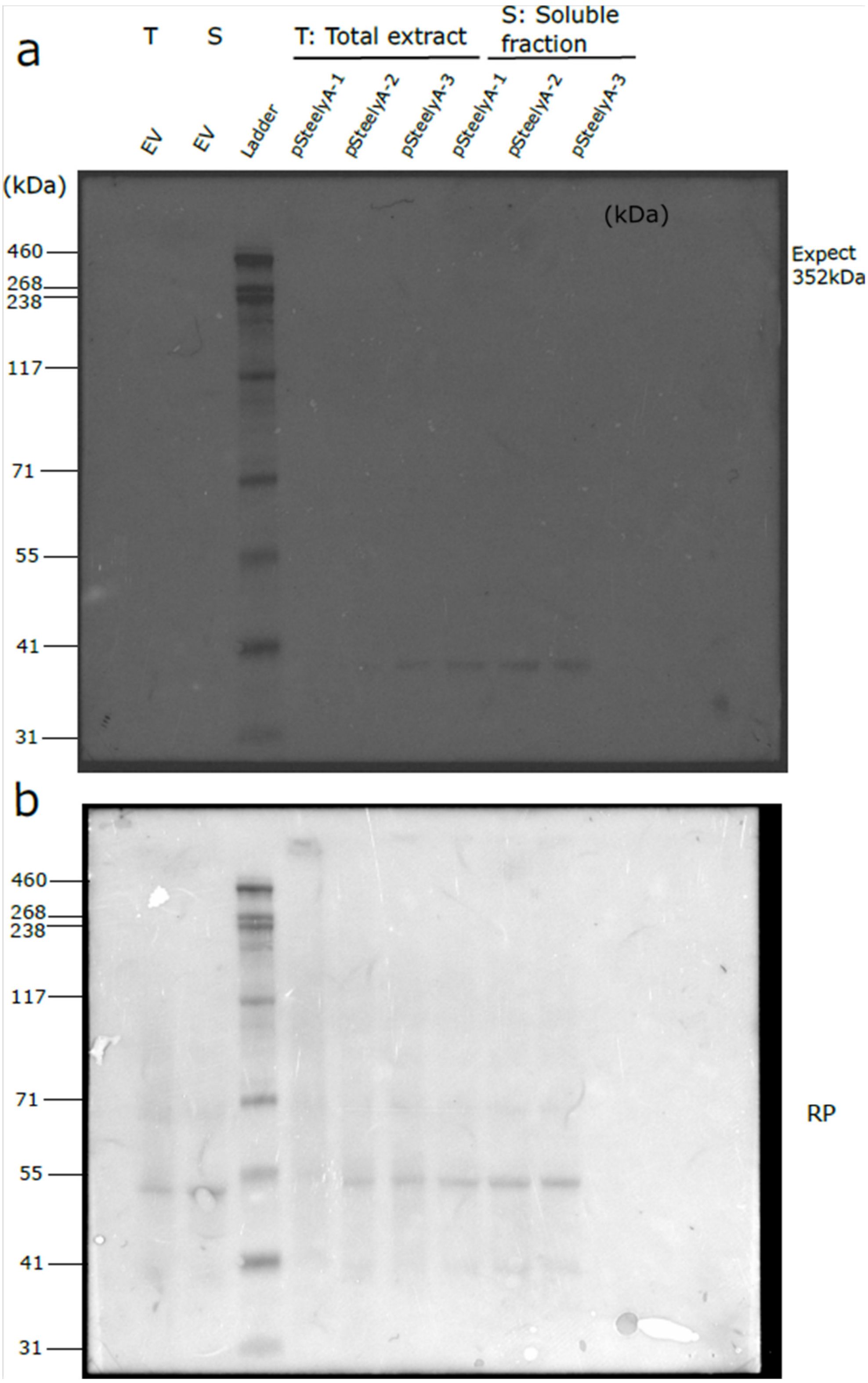

Figure 4. Detection of SteelyA protein in total protein extracts. (**a**) Western blot analysis using anti-myc on total protein extracts (T) and soluble protein fractions (S) from pSteelyA-1, pSteelyA-2, and pSteelyA-3 transconjugant cell lines. Proteins were separated on a GenScript SurePage Bris-Tris gel 4–12%. The empty vector (EV) transconjugants serve as a negative control. The SteelyA (StlA) protein is expected to be approximately 352 kDa. (**b**) Total protein staining of the blot using Ponceau Red (RP) to confirm protein transfer and loading consistency.

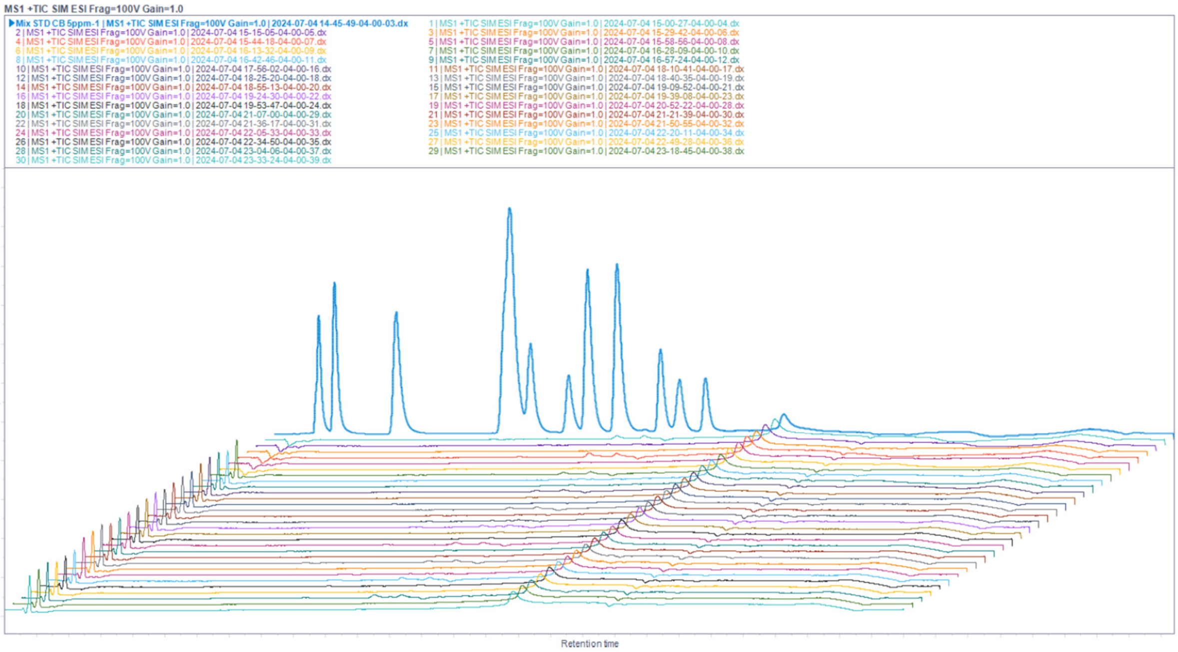

Figure 5. Total ion chromatogram (TIC) from LC-MS analysis in single ion monitoring (SIM) mode. The chromatogram includes a mix of standards showing expected peaks (blue) and triplicate samples from the empty vector (EV) control, and pSteelyA-1, pSteelyA-2, and pSteelyA-3 transconjugant lines (various colors). No transconjugant exhibited peaks corresponding to the expected SteelyA products. The monitored m/z values are listed in Table 1.

4. Discussion

Previous studies have demonstrated that large DNA insertions can be stably maintained in *P. tricornutum* via conjugation, such as the successful integration of a 49 kb construct [31]. Additionally, the production of heterologous proteins, including a 160 kDa antibody heavy chain, has been achieved in this diatom without adversely affecting growth [13]. In this study, we successfully introduced a 26 kb plasmid DNA into *P. tricornutum*, and the obtained transconjugant cell lines were stable over time under our experimental conditions. The Western blot analysis displays bands present in the total fraction pSteelyA-2 and pSteelyA-3 and in the soluble fraction of all pSteelyA samples and absent from the empty vector. All samples present a band around 40 kDa. No band is detectable in the empty vector samples, although a band is visible there in the Ponceau. Visible bands still hint towards the heterologous expression of the *D. discoideum* hybrid polyketide synthase SteelyA, displaying a 40 kDa fragment likely corresponding to its C-terminal region. Since the tag is located at the C-terminus, the detection of this smaller fragment could result from cleavage of a larger precursor or from alternative molecular events such as incomplete translation, internal translation initiation, splicing events, or species–species processing. These findings show that *P. tricornutum* is capable of the stable production over six months of a detectable portion of Steely A protein. The proteolytic cleaving of the SteelyA hypothesis remains plausible and may be linked to endogenous protease activity, such as a thrombin-like enzyme recently identified in *P. tricornutum*, although its exact sequence has not yet been characterized [33]. A long time kinetic of protein production and integrity verification could inform us on whether the cleavage of SteelyA is occurring progressively through subculturing due to progressive silencing mechanisms or instantaneously. One possible option to obtain catalytic activity is to identify the cutting or internal translation initiation or splicing sites and mutate them to increase the proportion of the complete form. Additionally, confirming full-length expression in *P. tricornutum* may require codon optimization or alternative expression strategies to improve translation efficiency and reduce potential processing issues. The use of a chaperone could also protect the protein from degradation. The inhibition of the endogenous thrombin could also be a viable option to increase SteelyA's stability and accumulation. It is observed in SteelyA's structure that it has an ACP site capable of binding with phosphopantetheine, and as *P. tricornutum* produces the molecule [21], the lack of a potential cofactor cannot be the cause of a lack of activity. A control over glycosylation patterns could increase protein stability, however, *P. tricornutum*'s protein glycosylation patterns are still being investigated [34–38].

Interestingly, the presence of SteelyA resulted in a distinct morphological change, with transconjugant cells displaying an average of 25% reduction in length compared to the EV control cells, while maintaining a consistent width (Figure 3B,C and Appendix A—Figure A2). This suggests that the metabolic burden of producing such a large protein might have influenced cell morphology. However, despite the considerable size of SteelyA, more than twice the weight of previously expressed proteins, the overall growth of transconjugants remained unaffected (Figure 3A). This finding reinforces *P. tricornutum*'s potential as a suitable host for the heterologous production of large proteins.

In conclusion, this study achieved expression of a C-terminal fragment of the 352 kDa recombinant SteelyA protein in *P. tricornutum*, highlighting remaining obstacles for diatoms' potential as a host for large heterologous proteins [39]. Future efforts should focus on optimizing expression conditions, thrombin's activity and inhibition, and targeting specific cellular compartments to enhance SteelyA's stability and activity to enable functional cannabinoid biosynthesis in this host. In all, this provides valuable negative data, which are important for guiding future engineering strategies to achieve functional production of complex, large enzymes in diatoms.

Author Contributions: N.S.: conceptualization, data curation, formal analysis, investigation, methodology, writing—original draft, writing—review and editing. B.L.: formal analysis, data curation, investigation, writing—review and editing. S.-E.G.: formal analysis, writing—review and editing. A.C.: formal analysis, validation. N.M.: conceptualization, formal analysis, investigation, writing—review and editing. F.M.-M.: formal analysis, investigation, methodology, writing—review and editing. I.D.-P.: conceptualization, funding acquisition, project administration, resources, supervision, writing—review and editing. All authors have read and agreed to the published version of the manuscript.

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Informed Consent Statement: Not applicable.

Data Availability Statement: Data generated or analyzed during this study are provided in full within the published article and from the corresponding author upon reasonable request.

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Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A

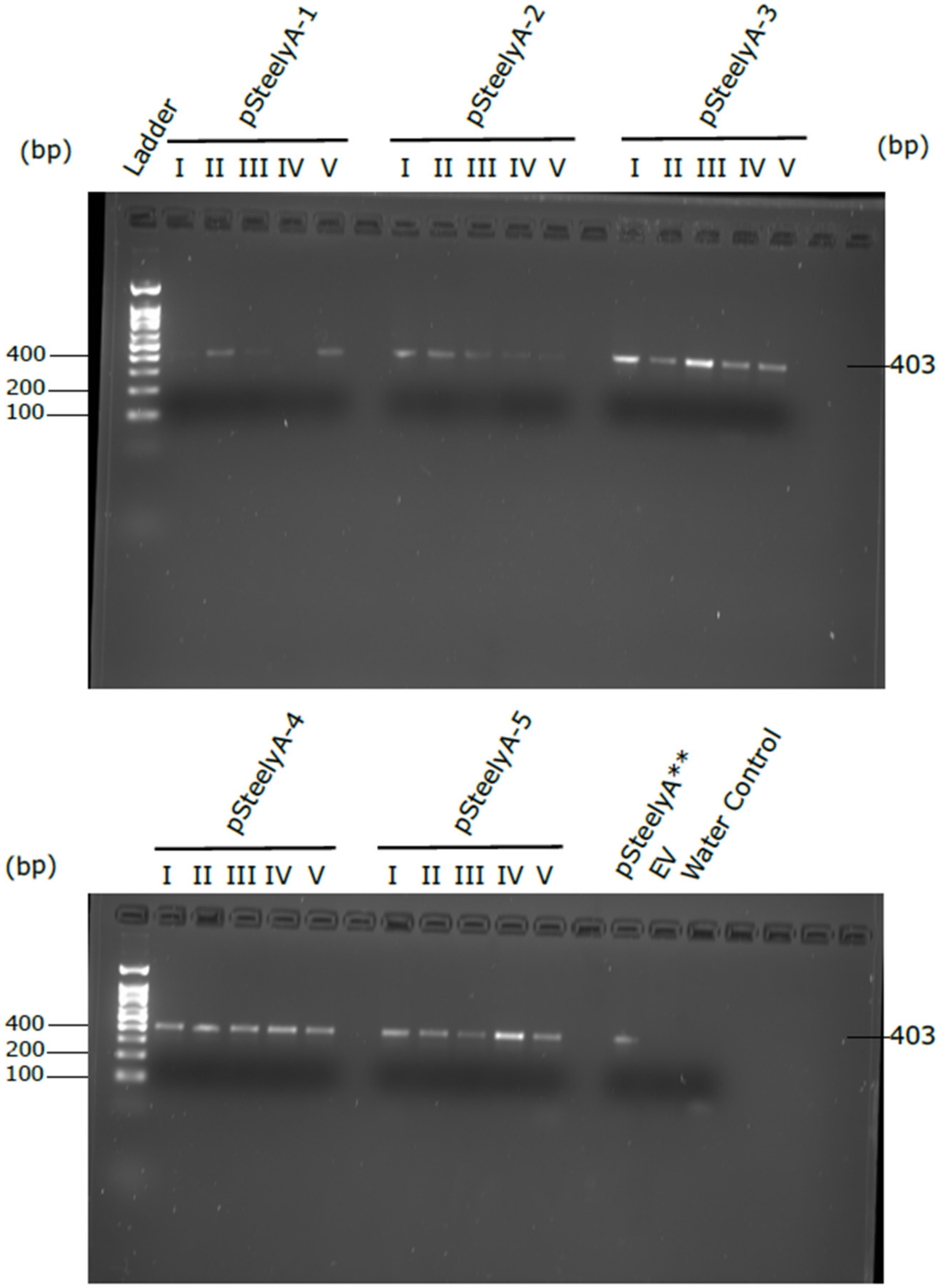

Figure A1. *P. tricornutum* SteelyA transconjugant colony PCR. Agarose gel (1%) of five colony PCR from five independent *P. tricornutum* SteelyA clones. Each number under the steely clone represents a different colony picked. Amplicons were obtained using primers binding in the methyltransferase domain and were expected to amplify a 403 bp fragment. Transconjugant pSteelyA** is DNA extracted from a previous assembly verified by NGS that displayed a premature stop codon. I, II, III, IV and V represented different clones.

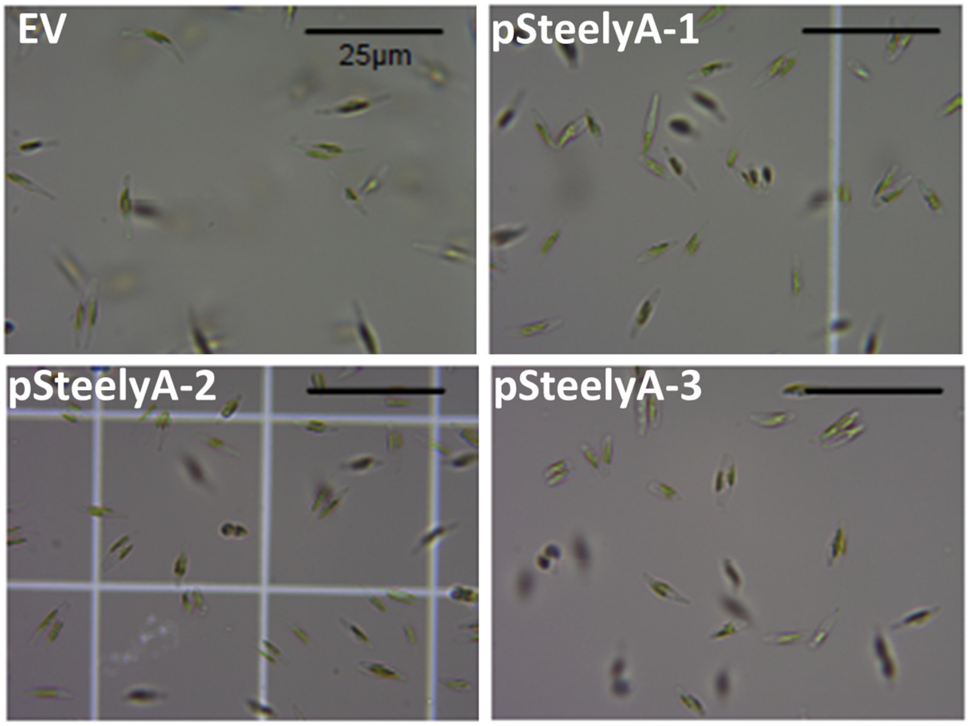

Figure A2. Optic microscope images of *P. tricornutum* SteelyA transconjugants. Phenotype observation showed a decrease of 25% on average compared to p*Pt*GE30. Observation through the optical microscope, magnification ×10.

Table A1. Table of all primers used in this study.

Primer	Sequences
E30-Stshble-F	TCATTAGTTGCAGTCACTCCGCTTTGGTTTCGTAACTATAACGGTCCTAAGGTAGCGAAC
E30-Stshble-R	GTTCGCTACCTTAGGACCGTTATAGTTACGAAACCAAAGCGGAGTGACTGCAACTAATGA
Steely-E30-F	AGGTGTTCTTATGTAGTTTTACACAGGAGTCTGGACTTGACATACAGTGAATGTAACTTT
Steely-E30-R	TAAGAAGAGCACATACCTCAGTCACTTATTATCACTAGCGAAACCAAAGCGGAGTGACTG
F-St-met-seq	GAGAAAAGAGGGTGTTCAGA
R-St-met-seq	GACTTAGGTTCAATACACAA
StlP1-R	CAATTTGTTGATTGGCGTAAACGTGAGTAGCAGACAAATC
StlP2-F	TCTAATTTCAAGTCCTTGAGATCCTTCGGTAGATTGATTG
StlP1-R 30	ATTGGCGTAAACGTGAGTAGCAGACAAATC
StlP2-F 30	AGTCCTTGAGATCCTTCGGTAGATTGATTG
St-E30shble-F	TCATTAGTTGCAGTCACTCCGCTTTGGTTTCATACAGTGAATGTAACTTTCGAATTGACA
St-E30shble-R	GTTCGCTACCTTAGGACCGTTATAGTTACGAAACCAAAGCGGAGTGACTGCAACTAATGA

Table A2. All DNA sequences used during the study.

	DNA Sequence
Genewiz fragment 1 (1MN)	CATACAGTGAATGTAACTTTCGAATTGACAGTATTAGTAGTCGTATTGACAGTGAGGCAC GCCCCTCAATGTGCGAGGTGGAAAATATACCAGCATGACAATGAATCTTGGAGATTCTTT TGCTGTCATCAAGATTCACCGCCAAATCTTCAGGAACCTATCACGTCCACAGGCGATGTT AATTCTTGAGTCGTCAAAACAAAGTCCTGTCCTACCTGTAGAAGTTGACAGCGAGCAATT GTATGCAAACTTCTGACTTTGTTATAATAACATTAAAGGTAATTAAGTATCTTCAATTAGGC ATTTTGTCACTGTCAGTCCGTTCCGACAATATAGGTAGATTTGGAATGAATCTTTTCTATG CTGCTGCGAATCTTGTACACCTTTGAGGCCGTAGATTCTGTCCGACGAAGCGATAATTAT TGCAAAATACATGGACTCATTATTTTGATTCGATTTCTTTTTGGTATCCGACTCGAAAAGA

Table A2. *Cont.*

	DNA Sequence
Genewiz fragment 1 (1MN)	TCCATCACGGCGAGCGCCACCATGAACAAGAACTCCAAAATCCAGTCCCCAAACTCTTC TGATGTTGCTGTTATTGGTGTTGGTTTTAGATTCCCAGGTAACTCTAATGACCCAGAATCT TTGTGGAACAACTTGTTGGATGGTTTCGATGCTATTACCCAAGTCCCAAAAGAAAGATGG GCTACTTCTTTTAGAGAGATGGGTTTGATCAAGAACAAGTTCGGTGGTTTCTTGAAGGAT TCTGAATGGAAGAATTTCGACCCTTTGTTCTTTGGTATCGGTCCAAAAGAAGCTCCATTC ATTGATCCACAACAAAGGTTGTTGTTGTCCATCGTTTGGGAATCTTTGGAAGATGCTTAC ATCAGACCAGATGAATTGAGAGGTTCTAACACTGGTGTTTTCATCGGTGTTTCTAACAAC GATTACACCAAGTTGGGTTTCCAAGACAACTACTCTATTTCTCCATACACTATGACCGGCT CTAACTCTTCATTGAACTCCAACAGAATTTCCTACTGCTTCGATTTTAGAGGTCCATCCAT TACTGTTGATACCGCTTGTTCTTCTTCCTTGGTTTCTGTTAATTTGGGTGTCCAATCCATC CAAATGGGTGAATGTAAGATTGCTATTTGCGGTGGTGTTAACGCTTTGTTTGATCCATCTA CATCTGTTGCCTTTTCCAAGTTGGGTGTTTTGTCTGAAAATGGCAGATGCAACTCTTTTA GTGATCAAGCCTCTGGTTACGTTAGATCTGAAGGTGCTGGTGTTGTTGTTTTGAAGTCTT TGGAACAAGCTAAGTTGGATGGTGATAGAATCTACGGTGTTATCAAGGGTGTTTCCTCTA ATGAAGATGGTGCTTCTAATGGTGACAAGAACTCTTTGACTACTCCATCTTGTGAAGCCC AATCCATTAACATTTCTAAGGCTATGGAAAAGGCCTCCTTGTCTCCATCTGATATCTATTAC ATTGAAGCCCATGGTACTGGTACTCCAGTTGGTGATCCAATTGAAGTTAAGGCCTTGTCC AAGATCTTCTCCAACTCTAACAACAACCAGTTGAACAACTTCTCTACCGATGGTAATGATA ACGATGATGATGATGACGATAACACCTCTCCAGAACCATTATTGATTGGCTCATTCAAGTC CAACATCGGTCATTTGGAATCTGCTGCTGGTATTGCTTCTTTGATTAAGTGTTGCTTGATG TTGAAGAACAGGATGTTGGTTCCATCCATTAACTGCTCTAATTTGAACCCATCCATTCCAT TCGATCAGTACAACATCTCCGTTATCAGAGAAATCAGACAATTCCCAACCGATAAGTTGGT TAACATCGGTATCAATTCTTTCGGTTTCGGTGGTTCTAACTGCCATTTGATTATTCAAGAGT ACAACAACAACTTCAAGAACAACTCTACCATCTGCAATAACAACAACAACAACAATAACAA CATCGACTACTTGATCCCAATCTCCTCTAAGACTAAGAAGTCCTTGGATAAGTACTTGATTT TGATCAAGACCAACTCCAACTACCACAAGGATATTTCTTTCGATGACTTCGTCAAGTTCCA AATCAAGTCTAAGCAGTACAACTTGTCCAACAGAATGACTACCATTGCTAACGATTGGAAC TCCTTCATTAAGGGTTCTAACGAATTCCACAACTTGATCGAATCTAAGGATGGTGAAGGTG GTTCTTCATCTTCTAACAGAGGTATTGATTCCGCCAATCAAATCAACACTACTACTACCTCT ACCATCAACGATATCGAACCTTTGTTGGTTTTCGTTTTCTGTGGTCAAGGTCCACAATGGA ATGGTATGATTAAGACCTTGTACAACTCCGAGAACGTTTTCAAGAACACCGTTGATCATGT TGACAGCATCTTGTACAAGTACTTCGGTTACTCCATTTTGAACGTCTTGTCTAAGATCGAT GATAACGACGATTCCATCAACCATCCAATAGTTGCTCAACCATCTTTGTTCTTGTTGCAAAT TGGTTTGGTCGAGTTGTTTAAGTACTGGGGTATCTACCCATCTATCTCTGTTGGTCATTCTT TCGGTGAAGTCTCTTCTTATTACTTGTCCGGTATCATCTCTTTGGAAACCGCTTGTAAAATC GTCTACGTCAGATCCTCTAATCAGAACAAAACTATGGGTTCCGGTAAGATGTTGGTTGTTT CTATGGGTTTTAAGCAATGGAACGATCAATTCTCTGCTGAATGGTCCGATATTGAAATTGCT TGTTACAACGCTCCAGATTCCATAGTTGTTACTGGTAACGAAGAAAGATTGAAAGAATTGT CCATCAAGTTGTCCGACGAATCCAATCAAATTTTCAACACCTTCTTGAGGTCCCCATGTTC TTTTCATTCTTCCCATCAAGAAGTCATCAAGGGTTCTATGTTCGAAGAGTTGTCTAACTTG CAATCTACTGGTGAAACCGAAATCCCTTTGTTCTCTACTGTTACTGGTAGACAAGTTTTGT CTGGTCATGTTACTGCTCAACACATCTACGATAATGTTAGAGAACCAGTCTTGTTCCAAAA GACGATTGAATCCATTACCTCCTACATCAAGTCTCACTACCCATCCAATCAAAAGGTTATCT ACGTTGAAATTGCTCCACACCCAACCTTGTTTTCATTGATCAAAAAGTCCATCCCATCCTC CAACAAGAATTCCTCTTCTGTTTTGTGTCCATTGAACAGAAAAGAAAACTCCAACAACTC CTACAAGAAGTTCGTTTCTCAGTTGTACTTCAACGGTGTTAACGTTGACTTCAACTTCCAG TTGAACTCCATTTGCGATAACGTTAACAACGATCACCATTTGAACAACGTCAAGCAAAACT CCTTCAAAGAGACTACCAATTCCTTGCCAAGATACCAATGGGAACAAGATGAATATTGGTC CGAACCATTGATCTCCAGAAAGAATAGATTGGAAGGTCCAACTACTTCCTTGTTGGGTCAT AGAATTATCTACAGCTTCCCAGTTTTCCAATCCGTTTTGGACTTGCAATCTGACAACTACA AATACTTGTTGGACCACTTGGTTAACGGTAAGCCAGTTTTTCCAGGTGCTGGTTATTTGGA TATCATCATCGAATTCTTCGACTACCAAAAGCAGCAGTTGAATTCCTCTGATTCCTCTAACT CCTACATCATCAACGTTGACAAGATCCAATTCTTGAACCCAATTCACTTGACCGAAAACAA

Table A2. *Cont.*

	DNA Sequence
Genewiz fragment 1 (1MN)	GTTGCAAACCTTGCAATCTTCTTTCGAACCTATCGTTACTAAGAAGTCTGCCTTCTCTGTTA ACTTCTTCATCAAGGATACCGTCGAGGATCAATCTAAGGTTAAGTCTATGTCTGACGAAACT TGGACTAACACTTGTAAGGCTACCATTTCCTTGGAACAACAACAGCCATCTCCATCTTCTAC TTTGACTTTGTCTAAGAAGCAAGACTTGCAGATCTTGAGAAACAGATGCGATATTAGCAAGC TAGACAAGTTTGAGTTGTACGACAAGATCTCTAAGAATTTGGGCTTGCAGTACAACTCCTTG TTTCAAGTTGTTGATACCATCGAAACTGGTAAGGATTGCTCTTTTGCTACTTTGTCTTTGCCA GAAGATACTTTGTTCACCACCATTTTGAACCCATGCTTGTTGGATAACTGTTTCCATGGTTT GTTGACCTTGATCAACGAAAAGGGTTCTTTCGTTGTCGAGTCCATTTCTTCTGTTTCTATCT ACTTGGAGAACATCGGTTCCTTCAATCAAACTTCTGTTGGTAACGTCCAGTTCTACTTGTAC ACCACTATTTCTAAAGCCACCTCCTTTAGTTCTGAAGGTACTTGTAAGTTGTTCACCAAGGAT GGTTCCTTGATTTTGTCTATCGGTAAGTTCATCATCAAGTCCACCAATCCAAAGTCTACTAAG ACCAACGAAACTATCGAATCTCCATTGGACGAAACCTTCTCTATTGAATGGCAATCTAAGGAT TCTCCAATTCCAACCCCACAACAAATCCAACAACAATCTCCATTGAACTCTAACCCATCCTTC ATTAGATCTACCATCTTGAAGGACATCCAGTTCGAACAATACTGCTCCTCCATTATCCACAAA GAATTGATCAACCACGAAAAGTACAAGAACCAGCAATCCTTCGATATCAACTCCTTGGAAAA CCACTTGAACGATGACCAATTGATGGAATCCTTGTCCATCTCCAAAGAATACTTGAGATTCTT CACCAGGATCATCTCCATCATTAAGCAATACCCAAAGATCTTGAACGAAAAAGAGCTAAAAG AATTGAAAGAAATCATCGAATTGAAGTACCCATCCGAAGTTCAGTTGTTGGAATTCGAAGTT ATCGAGAAGGTGTCCATGATTATCCCAAAGTTGTTGTTCGAAAACGACAAGCAATCTTCCAT GACCTTGTTCCAAGATAACTTGTTGACCAGGTTCTACTCCAATTCTAACTCTACCAGATTCTA CTTGGAAAGGGTTTCCGAAATGGTCTTGGAATCTATTAGACCAATCGTCAGAGAAAAGAGG GTGTTCAGAATTTTGGAAATTGGTGCTGATACAGCCTCTTTGTCTAATGTTGTTTTGACTAA GTTGAACACCTACTTGTCCACCTTGAATTCTAATGGTGGTTCTGGTTACAACATCATCATTGA GTACACCTTCACCGATATTTCCGCCAACTTCATTATTGGTGAAATCCAAGAAACCATGTGCAA CTTGTACCCAAACGTTACTTTCAAGTTCTCCGTCTTGGACTTGGAGAAAGAGATTATTAACT CCTCCGATTTCTTGATGGGTGATTACGATATAGTTTTGATGGCCTACGTTATCCATGCCGTTT CTAACATTAAGTTCTCCATCGAACAGTTGTACAAGTTGTTGTCTCCAAGAGGTTGGTTGTTG TGTATTGAACCTAAGTCCAACGTTGTGTTCTCCGATTTGGTTTTCGGTTGTTTTAATCAGTG GTGGAACTACTACGATGATATTAGAACTACCCACTGCTCCTTGTCTGAATCTCAATGGAATCA GTTGTTGTTGAACCAGTCCTTGAACAACGAATCCTCTTCTTCTTCTAACTGTTACGGTGGTT TCTCCAACGTTTCTTTTATTGGTGGTGAAAAGGATGTCGACTCCCATTCTTTCATATTGCACT GCCAAAAAGAATCCATCTCCCAAATGAAGTTAGCCACCACTATTAACAACGGTTTGTCATCT GGTTCCATCGTTATCGTTTTGAACTCTCAACAATTGACCAACATGAAGTCCTACCCAAAGGT TATTGAGTATATTCAAGAGGCTACCTCTTTGTGCAAGACCATTGAAATTATCGATTCCAAGGA CGTCTTGAACTCTACCAATTCAGTTTTGGAAAAGATCCAAAAGTCCTTGTTGGTGTTCTGTT TGTTGGGTTATGACTTGTTGGAGAACAACTACCAAGAACAGTCTTTCGAATACGTTAAGTTG TTGAACTTGATCTCTACTACCGCCTCTTCATCTAATGATAAGAAACCACCAAAGGTCTTGTTG ATCACCAAGCAATCTGAAAGAATCTCCAGGTCTTTCTACTCCAGATCCTTGATTGGTATTTCC AGAACCTCTATGAACGAGTACCCAAATTTGTCCATTACCTCTATCGATTTGGATACCAACGAC TACTCATTGCAGTCTTTGTTGAAGCCAATCTTCAGCAACTCTAAGTTTTCCGACAACGAGTT CATCTTCAAAAAGGGCTTGATGTTCGTGTCCAGGATCTTTAAGAACAAGCAGTTGCTAGAAT CCTCCAACGCTTTTGAAACTGACTCTTCTAACTTGTACTGTAAGGCCTCTTCTGACTTGTCT TACAAGTACGCTATTAAGCAGTCTATGTTGACCGAAAATCAGATCGAAATCAAGGTTGAATG CGTCGGTATTAACTTCAAGGACAACCTATTCTACAAGGGCTTGTTGCCACAAGAAATTTTCA GAATGGGTGACATCTACAATCCACCATATGGTTTGGAATGCTCTGGTGTTATTACCAGAATTG GTTCTAACGTCACCGAATACTCAGTTGGTCAAAATGTTTTTGGTTTCGCCAGACATTCTTTG GGTTCTCATGTTGTTACCAACAAGGATTTGGTTATCTTGAAGCCAGATACCATCTCATTTTCT GAAGCTGCTTCTATCCCAGTTGTTTACTGTACTGCTTGGTACTCCTTGTTCAACATTGGTCA GTTGTCTAACGAAGAATCCATCCTAATTCATTCTGCTACTGGTGGTGTAGGTTTGGCTTCTT TGAATTTGTTGAAAATGAAGAATCAGCAACAGCAACCATTGACCAATGTTTATGCTACTGTT GGCTCTAACGAGAAGAAGAAGTTCTTGATCGATAACTTCAACAACTTGTTCAAAGAGGACG GCGAAAACATTTTCTCTACCAGAGACAAAGAATACTCCAACCAGTTGGAATCCAAGATCGA TGTTATTTTGAACACCTTGTCCGGTGAATTCGTCGAATCTAATTTCAAGTCCTTGAGATCCT TCGGTAGATTGATTGATTTGTCTGCTACTCACGTTTGGATCCGGAAC

Table A2. *Cont.*

	DNA Sequence
Genewiz Fragment 2 (1Q)	ATCCTTCGGTAGATTGATTGATTTGTCTGCTACTCACGTTTACGCCAATCAACAAATTGGT CTAGGTAACTTCAAGTTCGACCACTTGTATTCTGCTGTTGACTTGGAAAGATTGATCGAC GAAAAACCTAAGTTGTTGCAGTCCATCTTGCAAAGAATTACCAACTCTATCGTCAACGGT TCCTTGGAAAAAATTCCAATTACCATCTTCCCATCCACCGAAACTAAGGATGCTATCGAAT TATTGTCCAAGAGATCCCATATCGGTAAAGTTGTTGTAGATTGCACCGATATCTCTAAGTG TAATCCTGTTGGTGATGTGATCACCAACTTCTCTATGAGATTGCCAAAGCCAAACTACCA GTTGAATTTGAACTCCACCTTGTTGATTACTGGTCAGTCTGGTTTGTCTATCCCTTTGTT GAATTGGTTGTTGTCTAAGTCTGGTGGTAACGTTAAGAACGTTGTCATCATTTCTAAGTC CACCATGAAGTGGAAGTTGCAGACTATGATTTCCCATTTCGTTTCCGGTTTCGGTATCCA TTTTAACTACGTTCAAGTCGACATCTCCAACTACGATGCTTTGTCTGAAGCTATTAAGCA ATTGCCATCTGATTTGCCACCAATCACCTCTGTTTTTCATTTGGCTGCTATCTACAACGA TGTTCCAATGGATCAAGTTACCATGTCTACCGTTGAATCTGTTCATAACCCTAAAGTTTT GGGTGCCGTTAACTTGCATAGAATCTCTGTTTCTTTTGGTTGGAAGTTGAACCACTTCG TCTTGTTCTCTTCTATTACTGCTATTACCGGTTACCCAGACCAATCTATCTACAATTCTGCC AACTCTATTTTGGACGCTTTGTCCAACTTTAGAAGGTTTATGGGTTTGCCATCCTTCTCCA TTAACTTGGGTCCAATGAAGGATGAAGGTAAGGTTTCTACCAACAAGAGCATCAAGAAGC TATTCAAGTCTAGAGGTTTGCCAAGCCTATCCTTGAACAAGTTATTTGGTTTGTTGGAGGT CGTCATCAACAACCCATCTAATCATGTTATCCCATCCCAATTGATTTGCTCCCCAATCGATT TCAAGACCTACATCGAATCTTTCTCAACTATGAGGCCAAAGTTGTTACACTTGCAACCTAC CATTTCCAAGCAGCAATCTTCTATCATTAACGATTCTACCAAGGCTTCCTCCAACATTTCAT TGCAAGATAAGATCACCTCCAAGGTGTCTGATTTGTTGTCCATTCCAATCTCCAAGATCAA CTTCGATCATCCATTGAAACACTACGGCTTGGATTCTTTGTTGACCGTTCAATTCAAATCC TGGATCGACAAAGAATTCGAAAAGAACTTGTTCACCCATATCCAATTGGCCACCATCTCTA TTAACTCATTCTTGGAAAAGGTGAACGGCTTGTCTACAAACAATAACAACAACAACAATTC CAACGTCAAGTCCTCTCCATCCATTGTCAAAGAAGAAATCGTTACCTTGGACAAGGATCAA CAACCATTGCTATTGAAAGAACACCAGCACATTATCATCTCCCCAGATATTAGAATCAACAA GCCAAAGAGGGAATCCTTGATTAGAACCCCAATCTTGAACAAATTCAACCAGATCACCGAA TCCATTATCACTCCATCTACACCATCTTTGTCCCAATCCGATGTTTTGAAAACTCCACCAATC AAGTCTTTGAACAACACTAAGAACTCCAGCTTGATTAACACCCCACCAATTCAATCTGTCCA ACAACATCAAAAGCAACAACAAAAGGTCCAAGTCATCCAACAACAGCAACAACCATTATCC AGATTGTCCTACAAGAGCAACAACAACTCTTTCGTTTTGGGTATCGGTATTTCTGTTCCAGG TGAACCTATTTCCCAACAATCCTTGAAAGACTCCATCTCCAATGACTTTTCTGATAAGGCTG AAACTAACGAGAAGGTCAAGAGAATCTTTGAGCAATCTCAAATCAAGACCAGACACTTGGT TAGAGATTACACTAAGCCAGAGAACTCCATCAAGTTCAGACATTTGGAAACCATTACCGATG TGAACAACCAGTTCAAGAAAGTTGTTCCAGATTTGGCTCAACAAGCCTGTTTGAGAGCTTT GAAAGATTGGGGTGGTGATAAGGGTGATATTACCCATATAGTTTCTGTTACCTCCACCGGTAT TATCATCCCAGATGTTAATTTCAAGTTGATCGACTTGTTGGGCTTGAACAAGGATGTTGAAA GAGTGTCTTTGAACCTAATGGGTTGTTTGGCTGGTTTGAGTTCTTTGAGAACTGCTGCTTC TTTGGCTAAGGCTTCTCCAAGAAATAGAATTTTGGTTGTCTGTACCGAAGTCTGCTCCTTGC ATTTTTCTAATACTGATGGTGGTGATCAAATGGTCGCCTCTTCTATTTTTGCTGATGGTTCTG CTGCTTACATTATTGGTTGTAACCCAAGAATTGAAGAAACCCCATTATACGAAGTCATGTGCT CCATTAACAGATCTTTCCCAAATACCGAAAACGCCATGGTTTGGGATTTGGAAAAAGAAGGT TGGAACTTGGGTTTGGATGCTTCTATTCCAATTGTCATTGGTTCTGGTATTGAAGCCTTCGTT GATACTTTGTTGGATAAGGCTAAGTTGCAAACTTCCACTGCTATTTCTGCTAAGGATTGCGAA TTCTTGATTCATACTGGTGGCAAGTCCATCTTGATGAACATCGAAAATTCCTTGGGTATCGAC CCAAAGCAAACTAAGAATACTTGGGATGTTTACCATGCCTACGGCAATATGTCATCTGCCTCT GTTATTTTCGTTATGGATCATGCCAGAAAGTCCAAGTCTTTGCCAACTTACTCAATTTCTTTG GCTTTTGGTCCAGGTTTGGCTTTTGAAGGTTGTTTCTTGAAGAACGTCGTCGAACAGAAGC TCATTTCCGAAGAGGACTTGTAACCGCAACAACTACCTCGACTTTGGCTGGGACACTTTCAG TGAGGACAAGAAGCTTCAGAAGCGTGCTATCGAACTCAACCAGGGACGTGCGGCACAAATG GGCATCCTTGCTCTCATGGTGCACGAACAGTTGGGAGTCTCTATCCTTCCTTAAAAATTTAAT TTTCATTAGTTGCAGTCACTCCGCTTTGGTTT
pPTGE30 sequencing	ACTAAGGGTACTGTTGACATTGCGAAGAGCGACAAAGATTTTGTTATCGGCTTTATTGCTCAA AGAGACATGGGTGGAAGAGATGAAGGTTACGATTGGTTGATTATGACACCCGGTGTGGGTTT

Table A2. *Cont.*

	DNA Sequence
pPTGE30 sequencing	AGATGACAAGGGAGACGCATTGGGTCAACAGTATAGAACCGTGGATGATGTGGTCTCTACAG GATCTGACATTATTATTGTTGGAAGAGGACTATTTGCAAAGGGAAGGGATGCTAAGGTAGAGG GTGAACGTTACAGAAAAGCAGGCTGGGAAGCATATTTGAGAAGATGCGGCCAGCAAAACTA AAAAACTGTATTATAAGTAAATGCATGTATACTAAACTCACAAATTAGAGCTTCAATTTAATTA TATCAGTTATTACCCGGCCGGGAATCTCGGTCGTAATGATTTTTATAATGACGAAAAAAAAAA AAATTGGAAAGAAAACCCCCCCCCCCCCCCGCAGCGTTGGGTCCTGGCCACGGGTGCGCATG ATCGTGCTCCTGTCGTTGAGGACCCGGCTAGGCTGGCGGGGTTGCCTTACTGGTTAGCAGAAT GAATCACCGATACGCGAGCGAACGTGAAGCGACTGCTGCTGCAAAACGTCTGCGACCTGAG CAACAACATGAATGGTCTTCGGTTTCCGTGTTTCGTAAAGTCTGGAAACGCGGAAGTCAGCG CCCTGCACCATTATGTTCCGGATCTGCATCGCAGGATGCTGCTGGCTACCCTGTGGAACACCT ACATCTGTATTAACGAAGCGCTGGCATTGACCCTGAGTGATTTTTCTCTGGTCCCGCCGCATC CATACCGCCAGTTGTTTACCCTCACAACGTTCCAGTAACCGGGCATGTTCATCATCAGTAACC CGTATCGTGAGCATCCTCTCTCGTTTCATCGAGTTACGCTAGGGATAACAGGGTAATATAGATC TTCCGCTGCATAACCCTGCTTCGGGGTCATTATAGCGATTTTTTCGGTATATCCATCCTTTTTCG CACGATATACAGGATTTTGCCAAAGGGTTCGTGTAGACTTTCCTTGGTGTATCCAACGGCGTC AGCCGGGCAGGATAGGTGAAGTAGGCCCACCCGCGAGCGGGTGTTCCTTCTTCACTGTCCC TTATTCGCACCTGGCGGTGCTCAACGGGAATCCTGCTCTGCGAGGCTGGCCGGCTACCGCC GGCGTAACAGATGAGGGCAAGCGGATGGCTGATGAAACCAAGCCAACCAGGAAGGGCAGC CCACCTATCAAGGTGTACTGCCTTCCAGACGAACGAAGAGCGATTGAGGAAAAGGCGGCGG CGGCCGGCATGAGCCTGTCGGCCTACCTGCTGGCCGTCGGCCAGGGCTACAAAATCACGGG CGTCGTGGACTATGAGCACGTCCGCGAGCTGGCCCGCATCAATGGCGACCTGGGCCGCCTG GGCGGCCTGCTGAAACTCTGGCTCACCGACGACCCGCGCACGGCGCGGTTCGGTGATGCC ACGATCCTCGCCCTGCTGGCGAAGATCGAAGAGAAGCAGGACGAGCTTGGCAAGGTCATGA TGGGCGTGGTCCGCCCGAGGGCAGAGCCATGACTTTTTTAGCCGCTAAAACGGCCGGGGGG TGCGCGTGATTGCCAAGCACGTCCCCATGCGCTCCATCAAGAAGAGGCACTTCGAGCTGTAA GTACATCACCGACGAGCAAGGCAAGACGATCCGCGCCTGTTTTATTGAGAACGTTGTTCGTGT TGGCCTCAATGGTAGCGATGCGTCATTCAGCGAAGTTCTGGTGCTGATGATGTGGTTCGCTTTG CCACTGGTCAATGTGGTAAGCCCGTGTAATGTCAGTAACCTTTTTACTGATCTCAGCTTGAGCA CGGTCGCTGATGAGCTTATCCATGGCCCCACGGTAACGGATATGATCCTCTAGGGCGTTGACA AATTCTTTGTCGGTTTTCATGGGGTAGACGTCAGTGACCAGGGAACGTCTCCCTACAAAAAGT TGCGCATACTTTGCTCCGTTGTCGACGGCAGGGGTGTCGGACCAGATTGTATCTGTGGCAACG GCCTCATTGCGTCAATGGACCTTTAAAGCCGGGAAACGAGACTTGAAATGTTTACGTAGAGG TGCATTATAGACCTCACGCGCATATTGAGTGGTTGCAAAAATGGTTTTGCGAACGGTATCACT GGAGACCCATGCCAGGCAAGGACGGAGGGCATCATAATCATGTTCATTGCGTTGGACAGCAT GCTTGTTACACGTAAGTATACGGTCGAGAGCATCGTGACGTTGAGAATTACAGATGGCAACGT GTCGGTGCATGTATTGGCCGAGATTGTCAAATCGTGGCTCAATATATGGCATGCCAGGTAAGTC ATGGATGTCGGTATGCCATTCAGCCTTCATGTCGATTTCGTTGTCGAGAACTGATGGGTCCCAG TCAACGTCAGAAGTAAGAACAACATGGGGAAGGGAATGAAGTTCATGACTGGTGGGTGCGC GCATATCCATGTACGGAAGACCCTGTCGTATGTTTAGTGGGATGATGTAATCATCCAGGGTAAC AATACGTTGGTTGCCGCCCACGGTACGAGACCGATCTTGAACACAATTGTGGCAATGTTCAAG TTGGGCGCTGGAATGGATGGTTTTACCTTTACCAAGATGCGCGTATTGATGCATGATAACAACA ATGGGCCCTCGTTGCGATTCGACAAGACCGGCAGCCGTGACAATGTCTAGATTGGACAAGGT ATGTTCATTTATACCGGTTATGTTGGCTGAACGTCCAGTTTTGTGCAGTACGGTAACATCACTCC CCGCAAGTCCACCGTTGGCACCGCGATCGACAAGTGCAGATGTGGTATTTTGTACTGTGTGTC GGGAGACTTGGTACTGTAACACATTTGACTGAAGTGACTTGGTGGTACCATGAGGACGGAGG GAACCCGTTGATACGGTGTTGCGTGACGCTGCAAGTACCTTACGTATGTCGCCTGGATCCAT ACGTCCAACCCGATCAGAAAGATGTGCTAGGAGTTCCGTTTCTGGTGCACAATCATGAAAGG TATCCACGGGAGTTCCATTGTTGTCGTCCGGGGCTGCGTCGCGACTGCCAGTTGCATGTACAT GCGCCATCAAGGGACGTGCCAATCCATTACTAACCGGGAGAACCTTAGCTGGGGCAGCCAA TCCCTGAAGTATAGCCTTAGCATCATCTGAGAGCTGGTTCCACATATCTCTAGGGATATAAG GTCGTTCACGGTTAGTGGGCGTACTATGATGTCGGTTATTAGTACAATTCTCCCTGCGGG CATGCGCATTGGCTTCATAGAGTACGGAAGGTGACAAGTCAATATTGTAGTTAACATCCG GATCAGTGTCAAAGTCTGTAGGATGGTAAGAAAGATCAGTAGAATGAATACTACGCTTTT CCTTGGGACTACGGGAATTAGAGAAGTTGTTTCCTTTATTGTAGAGTGACGCTGAAGCA AGTAGAAGACTAAGGTAACTCTCGTAGCTAATAGGATTACCTCCTTTGGCTAGGTC

Table A2. *Cont.*

	DNA Sequence
pPTGE30 sequencing	AAGAGTGGCTGTGATCTTCACTTGACAAAGTTCCGGTACATTGTGGACAGCATTCTCCAAAAG ACTAAGACACAGTTGCTTTGGGAGTTGCTCAGCCATTGGTACAGTATTGTGGTAGATACAAA GGTGGTTCTTCCAATGAAGGATAAATCCTTCTGCTGTGCCTGTCCATGAGGATCCATATTTCGC CGTAGTTAGGTAACCAAGCGTGGTGGCTGAACTGATCTTCGCACTTGCTGATTCCGTATAGTG TTTGACAACTTTACAAAACACTTCTTGCGCAGTTCGCTCTAGCCTGGACAGAGAAGGGACAA TCTTCGTCGTTAAGACTCGTGCGAATAGCAAAAGATCACAAAATAGCACATCGGCACCGACC AACGATTATTTCCAAGGAAAAAAAGAATGCTTCACTACAAGAAATTGTGTCATCCCTATACAG AGTCTTGTTACTGTGACAGAAAATTGATGGAAGATGTGGCGGATTGCCTTTACACTAGCCAA CTTGTTCGACTAATTGCAGCTTCTTCTGAGAGGCTTCACCGAGTAACGCGAAGAACACCGG TGTCTCGTACATGCTCGTCGGTGAACGCTCGTCCAATGACACCCCCCACTTTGTATCAATAT CCCAACTTGGTAGTGAACTGGAATGATACATGCAATTTCGCGCCGCATCAACAGCCACGGG CACCATCGACGAATAGACTCGGTCGAGCTGGTTGCCCTCGCCGCTGGGCTGGCGGCC GTCTATGGCCCTGCAAACGCGCCAGAAACGCCGTCGAAGCCGTGTGCGAGACACCGCG GCCGGCCGCCGGCGTTGTGGATACCTCGCGGAAAACTTGGCCCTCACTGACAGATG AGGGGCGGACGTTGACACTTGAGGGGCCGACTCACCCGGCGCGGCGTTGACAGATG AGGGGCAGGCTCGATTTCGGCCGGCGACGTGGAGCTGGCCAGCCTCGCAAATCGGC GAAAACGCCTGATTTTACGCGAGTTTCCCACAGATGATGTGGACAAGCCTGGGGATAAGTGC CCTGCGGTATTGACACTTGAGGGGCGCGACTACTGACAGATGAGGGGCGCGATCCTTGACAC TTGAGGGGCAGAGTGCTGACAGATGAGGGGCGCACCTATTGACATTTGAGGGGCTGTCCACA GGCAGAAAATCCAGCATTTGCAAGGGTTTCCGCCCGTTTTTCGGCCACCGCTAACCTGTCTTT TAACCTGCTTTTAAACCAATATTTATAAACCTTGTTTTTAACCAGGGCTGCGCCCTGTGCGCGT GACCGCGCACGCCGAAGGGGGGTGCCCCCCCTTCTCGAACCCTCCCGGTCGAGTGAGCGAG GAAGCACCAGGGAACAGCACTTATATATTCTGCTTACACACGATGCCTGAAAAAACTTCCCTT GGGGTTATCCACTTATCCACGGGGATATTTTTATAATTATTTTTTTTATAGTTTTTAGATCTTCTTT TTTAGAGCGCCTTGTAGGCCTTTATCCATGCTGGTTCTAGAGAAGGTGTTGTGACAAATTGCCC TTTCAGTGTGACAAATCACCCTCAAATGACAGTCCTGTCTGTGACAAATTGCCCTTAACCCTG TGACAAATTGCCCTCAGAAGAAGCTGTTTTTTCACAAAGTTATCCCTGCTTATTGACTCTTTTT TATTTAGTGTGACAATCTAAAAACTTGTCACACTTCACATGGATCTGTCATGGCGGAAACAGC GGTTATCAATCACAAGAAACGTAAAAATAGCCCGCGAATCGTCCAGTCAAACGACCTCACTG AGGCGGCATATAGTCTCTCCCGGGATCAAAAACGTATGCTGTATCTGTTCGTTGACCAGATCA GAAAATCTGATGGCACCCTACAGGAACATGACGGTATCTGCGAGATCCATGTTGCTAAATATG CTGAAATATTCGGATTGACCTCTGCGGAAGCCAGTAAGGATATACGGCAGGCATTGAAGAGT TTCGCGGGGAAGGAAGTGGTTTTTTATCGCCCTGAAGAGGATGCCGGCGATGAAAAAGGCTA TGAATCTTTTCCTTGGTTTATCAAACGTGCGCACAGTCCATCCAGAGGGCTTTACAGTGTACAT ATCAACCCATATCTCATTCCCTTCTTTATCGGGTTACAGAACCGGTTTACGCAGTTTCGGCTTAG TGAAACAAAAGAAATCACCAATCCGTATGCCATGCGTTTATACGAATCCCTGTGTCAGTATCG TAAGCCGGATGGCTCAGGCATCGTCTCTCTGAAAATCGACTGGATCATAGAGCGTTACCAGCT GCCTCAAAGTTACCAGCGTATGCCTGACTTCCGCCGCCGCTTCCTGCAGGTCTGTGTTAATG AGATCAACAGCAGAACTCCAATGCGCCTCTCATACATTGAGAAAAAGAAAGGCCGCCAGA CGACTCATATCGTATTTTCCTTCCGCGATATCACTTCCATGACGACAGGATAGTCTGAGGGT TATCTGTCACAGATTTGAGGGTGGTTCGTCACATTTGTTCTGACCTACTGAGGGTAATTTGT CACAGTTTTGCTGTTTCCTTCAGCCTGCATGGATTTTCTCATACTTTTTGAACTGTAATTTT TAAGGAAGCCAAATTTGAGGGCAGTTTGTCACAGTTGATTTCCTTCTCTTTCCCTTCGTCA TGTGACCTGATATCGGGGGTTAGTTCGTCATCATTGATGAGGGTTGATTATCACAGTTTATTA CTCTGAATTGGCTATCCGCGTGTGTACCTCTACCTGGAGTTTTTCCCACGGTGGATATTTCT TCTTGCGCTGAGCGTAAGAGCTATCTGACAGAACAGTTCTTCTTTGCTTCCTCGCCAGTTC GCTCGCTATGCTCGGTTACACGGCTGCGGCGAGCATCACGTGCTATAAAAATAATTATAATT TAAATTTTTTAATATAAATATATAAATTAAAAATAGAAAGTAAAAAAAGAAATTAAAGAAAAA ATAGTTTTTGTTTTCCGAAGATGTAAAAGACTCTAGGGGGATCGCCAACAAATACTACCTTTT ACCTTGCTCTTCCTGCTCTCAGGTATTAATGCCGAATTGTTTCATCTTGTCTGTGTAGAAGA CCACACACGAAAATCCTGTGATTTTACATTTTACTTATCGTTAATCGAATGTATATCTATTTAA TCTGCTTTTCTTGTCTAATAAATATATATGTAAAGTACGCTTTTTGTTGAAATTTTTTAAACCT TTGTTTATTTTTTTTTCTTCATTCCGTAACTCTTCTACCTTCTTTATTTACTTTCTAAAATCCA AATACAAAACATAAAAATAAATAAACACAGAGTAAATTCCCAAATTATTCCATCATTAAAAGA TACGAGGCGCGTGTAAGTTACAGGCAAGCGATCCTAGTACACTCTATATTTTTTTATGCCTCG

Table A2. *Cont.*

	DNA Sequence
pPTGE30 sequencing	GTAATGATTTTCATTTTTTTTTTCCACCTAGCGGATGACTCTTTTTTTTTCTTAGCGATTGGC ATTATCACATAATGAATTATACATTATATAAAGTAATGTGATTTCTTCGAAGAATATACTAAAAA ATGAGCAGGCAAGATAAACGAAGGCAAAGATGACAGAGCAGAAAGCCCTAGTAAAGCGTA TTACAAATGAAACCAAGATTCAGATTGCGATCTCTTTAAAGGGTGGTCCCCTAGCGATAGA GCACTCGATCTTCCCAGAAAAAGAGGCAGAAGCAGTAGCAGAACAGGCCACACAATCGC AAGTGATTAACGTCCACACAGGTATAGGGTTTCTGGACCATATGATACATGCTCTGGCCAA GCATTCCGGCTGGTCGCTAATCGTTGAGTGCATTGGTGACTTACACATAGACGACCATCA CACCACTGAAGACTGCGGGATTGCTCTCGGTCAAGCTTTTAAAGAGGCCCTAGGGGCCG TGCGTGGAGTAAAAAGGTTTGGATCAGGATTTGCGCCTTTGGATGAGGCACTTTCCAGA GCGGTGGTAGATCTTTCGAACAGGCCGTACGCAGTTGTCGAACTTGGTTTGCAAAGGGA GAAAGTAGGAGATCTCTCTTGCGAGATGATCCCGCATTTTCTTGAAAGCTTTGCAGAGGC TAGCAGAATTACCCTCCACGTTGATTGTCTGCGAGGCAAGAATGATCATCACCGTAGTGA GAGTGCGTTCAAGGCTCTTGCGGTTGCCATAAGAGAAGCCACCTCGCCCAATGGTACCA ACGATGTTCCCTCCACCAAAGGTGTTCTTATGTAGTTTTACACAGGAGTCTGGACTTGAC GCTAGTGATAATAAGTGACTGAGGTATGTGCTCTTCTTATCTCCTTTTGTAGTGTTGCTCT TATTTTAAACAACTTTGCGGTTTTTTGATGACTTTGCGATTTTGTTGTTGCTTTGCAGTAA ATTGCAAGATTTAATAAAAAAACGCAAAGCAATGATTAAAGGATGTTCAGAATGAAACTC ATGGAAACACTTAACCAGTGCATAAACGCTGGTCATGAAATGACGAAGGCTATCGCCATT GCACAGTTTAATGATGACAGCCCGGAAGCGAGGAAAATAACCCGGCGCTGGAGAATAGG TGAAGCAGCGGATTTAGTTGGGGTTTCTTCTCAGGCTATCAGAGATGCCGAGAAAGCAG GGCGACTACCGCACCCGGATATGGAAATTCGAGGACGGGTTGAGCAACGTGTTGGTTAT ACAATTGAACAAATTAATCATATGCGTGATGTGTTTGGTACGCGATTGCGACGTGCTGAA GACGTATTTCCACCGGTGATCGGGGTTGCTGCCCATAAAGGTGGCGTTTACAAAACCTC AGTTTCTGTTCATCTTGCTCAGGATCTGGCTCTGAAGGGGCTACGTGTTTTGCTCGTGG AAGGTAACGACCCCCAGGGAACAGCCTCAATGTATCACGGATGGGTACCAGATCTTCATA TTCATGCAGAAGACACTCTCCTGCCTTTCTATCTTGGGGAAAAGGACGATGTCACTTATG CAATAAAGCCCACTTGCTGGCCGGGGCTTGACATTATTCCTTCCTGTCTGGCTCTGCACC GTATTGAAACTGAGTTAATGGGCAAATTTGATGAAGGTAAACTGCCCACCGATCCACACC TGATGCTCCGACTGGCCATTGAAACTGTTGCTCATGACTATGATGTCATAGTTATTGACAG CGCGCCTAACCTGGGTATCGGCACGATTAATGTCGTATGTGCTGCTGATGTGCTGATTGTT CCCACGCCTGCTGAGTTGTTTGACTACACCTCCGCACTGCAGTTTTTCGATATGCTTCGTG ATCTGCTCAAGAACGTTGATCTTAAAGGGTTCGAGCCTGATGTACGTATTTTGCTTACCAA ATACAGCAATAGCAATGGCTCTCAGTCCCCGTGGATGGAGGAGCAAATTCGGGATGCCTG GGGAAGCATGGTTCTAAAAAATGTTGTACGTGAAACGGATGAAGTTGGTAAAGGTCAGAT CCGGATGAGAACTGTTTTTGAACAGGCCATTGATCAACGCTCTTCAACTGGTGCCTGGAG AAATGCTCTTTCTATTTGGGAACCTGTCTGCAATGAAATTTTCGATCGTCTGATTAAACCA CGCTGGGAGATTAGATAATGAAGCGTGCGCCTGTTATTCCAAAACATACGCTCAATACTCA ACCGGTTGAAGATACTTCGTTATCGACACCAGCTGCCCCGATGGTGGATTCGTTAATTGCG CGCGTAGGAGTAATGGCTCGCGGTAATGCCATTACTTTGCCTGTATGTGGTCGGGATGTGA AGTTTACTCTTGAAGTGCTCCGGGGTGATAGTGTTGAGAAGACCTCTCGGGTATGGTCAG GTAATGAACGTGACCAGGAGCTGCTTACTGAGGACGCACTGGATGATCTCATCCCTTCTT TTCTACTGACTGGTCAACAGACACCGGCGTTCGGTCGAAGAGTATCTGGTGTCATAGAAA TTGCCGATGGGAGTCGCCGTCGTAAAGCTGCTGCACTTACCGAAAGTGATTATCGTGTTC TGGTTGGCGAGCTGGATGATGAGCAGATGGCTGCATTATCCAGATTGGGTAACGATTATC GCCCAACAAGTGCTTATGAACGTGGTCAGCGTTATGCAAGCCGATTGCAGAATGAATTTG CTGGAAATATTTCTGCGCTGGCTGATGCGGAAAATATTTCACGTAAGATTATTACCCGCTG TATCAACACCGCCAAATTGCCTAAATCAGTTGTTGCTCTTTTTTTCTCACCCCGGTGAACTA TCTGCCCGGTCAGGTGATGCACTTCAAAAAGCCTTTACAGATAAAGAGGAATTACTTAAG CAGCAGGCATCTAACCTTCATGAGCAGAAAAAAGCTGGGGTGATATTTGAAGCTGAAGA AGTTATCACTCTTTTAACTTCTGTGCTTAAAACGTCATCTGCATCAAGAACTAGTTTAAGC TCACGACATCAGTTTGCTCCTGGAGCGACAGTATTGTATAAGGGCGATAAAATGGTGCTT AACCTGGACAGGTCTCGTGTTCCAACTGAGTGTATAGAGAAAATTGAGGCCATTCTTAAG GAACTTGAAAAGCCAGCACCCTGATGCGACCTCGTTTTAGTCTACGTTTATCTGTCTTTAC TTAATGTCCTTTGTTACAGGCCAGAAAGCATAACTGGCCTGAATATTCTCTCTGGGCCCAC TGTTCCACTTGTATCGTCGGTCTGATAATCAGACTGGGACCACGGTCCCACTCGTATCGT

Table A2. *Cont.*

	DNA Sequence
pPTGE30 sequencing	CGGTCTGATTATTAGTCTGGGACCATGGTCCCACTCGTATCGTCGGTCTGATTATTAGTCT GGGACCACGGTCCCACTCGTATCGTCGGTCTGATTATTAGTCTGGAACCACGGTCCCAC TCGTATCGTCGGTCTGATTATTAGTCTGGGACCACGGTCCCACTCGTATCGTCGGTCTGA TTATTAGTCTGGGACCACGATCCCACTCGTGTTGTCGGTCTGATTATCGGTCTGGGACCA CGGTCCCACTTGTATTGTCGATCAGACTATCAGCGTGAGACTACGATTCCATCAATGCCT GTCAAGGGCAAGTATTGACATGTCGTCGTAACCTGTAGAACGGAGTAACCTCGGTGTGC GGTTGTATGCCTGCTGTGGATTGCTGCTGTGTCCTGCTTATCCACAACATTTTGCGCACG GTTATGTGGACAAAATACCTGGTTACCCAGGCCGTGCCGGCACGTTAACCGGGCTGCAT CCGATGCAAGTGTGTCGCTGTCGACGAGCTCGCGAGCTCGGACATGAGGTTGCCCCGT ATTCAGTGTCGCTGATTTGTATTGTCTGAAGTTGTTTTTACGTTAAGTTGATGCAGATCA ATTAATACGATACCTGCGTCATAATTGATTATTTGACGTGGTTTGATGGCCTCCACGCACG TTGTGATATGTAGATGATAATCATTATCACTTTACGGGTCCTTTCCGGTGATCCGACAGGT TACGGGGCGGCGACCTCGCGGGTTTTCGCTATTTATGAAAATTTTCCGGTTTAAGGCGTT TCCGTTCTTCTTCGTCATAACTTAATGTTTTTATTTAAAATACCCTCTGAAAAGAAAGGAA ACGACAGGTGCTGAAAGCGAGCTTTTTGGCCTCTGTCGTTTCCTTTCTCTGTTTTTGTC CGTGGAATGAACAATGGAAGTCCGAGCTCATCGCTAATAACTTCGTATAGCATACATTATA CGAAGTTATATTCGATGCGGCCGCAAGGGGTTCGCGTCAGCGGGTGTTGGCGGGTGTC GGGGCTGGCTTAACTATGCGGCATCAGAGCAGATTGTACTGAGAGTGCACCATATGCGG TGTGAAATACCACACAGATGCGTAAGGAGAAAATACCGCATCAGGCGCCATTCGCCATT CAGCTGCGCAACTGTTGGGAAGGGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAGC TGGCGAAAGGGGGATGTGCTGCAAGGCGATTAAGTTGGGTAACGCCAGGGTTTTCCCA GTCACGACGTTGTAAAACGACGGCCAGTGAATTGTAATACGACTCACTATAGGGCGAAT TCGAGCTCGGTACCCGGGGATCCTCTAGAGTCGACCTGCAGGCATGCAAGCTTGAGTA TTCTATAGTCTCACCTAAATAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTGTGAA ATTGTTATCCGCTCACAATTCCACACAACATACGAGCCGGAAGCATAAAGTGTAAAGCC TGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCTCACTGCCCGCTT TCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAATGAATCGGCCAACGCGAACCCC TTGCGGCCGCCCGGGCCGTCGACCAATTCTCATGTTTGACAGCTTATCATCGAATTTC TGCCATTCATCCGCTTATTATCACTTATTCAGGCGTAGCAACCAGGCGTTTAAGGGCAC CAATAACTGCCTTAAAAAAATTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAA TTCATTAAGCATTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCTGAATCG CCAGCGGCATCAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGGG GGCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAACTGGTGAAACTCACCCAG GGATTGGCTGAGACGAAAAACATATTCTCAATAAACCCTTTAGGGAAATAGGCCAGGT TTTCACCGTAACACGCCACATCTTGCGAATATATGTGTAGAAACTGCCGGAAATCGTCG TGGTATTCACTCCAGAGCGATGAAAACGTTTCAGTTTGCTCATGGAAAACGGTGTAAC AAGGGTGAACACTATCCCATATCACCAGCTCACCGTCTTTCATTGCCATACGAAATTCC GGATGAGCATTCATCAGGCGGGCAAGAATGTGAATAAAGGCCGGATAAAACTTGTGCT TATTTTTCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGGTCTGGTTATAG GTACATTGAGCAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATTGGGATAT ATCAACGGTGGTATATCCAGTGATTTTTTTCTCCATTTTAGCTTCCTTAGCTCCTGAAA ATCTCGATAACTCAAAAAATACGCCCGGTAGTGATCTTATTTCATTATGGTGAAAGTTG GAACCTCTTACGTGCCGATCAACGTCTCATTTTCGCCAAAAGTTGGCCCAGGGCTTC CCGGTATCAACAGGGACACCAGGATTTATTTATTCTGCGAAGTGATCTTCCGTCACAG GTATTTATTCGCGATAAGCTCATGGAGCGGCGTAACCGTCGCACAGGAAGGACAGAG AAAGCGCGGATCTGGGAAGTGACGGACAGAACGGTCAGGACCTGGATTGGGGAGG CGGTTGCCGCCGCTGCTGCTGACGGTGTGACGTTCTCTGTTCCGGTCACACCACAT ACGTTCCGCCATTCCTATGCGATGCACATGCTGTATGCCGGTATACCGCTGAAAGTTC TGCAAAGCCTGATGGGACATAAGTCCATCAGTTCAACGGAAGTCTACACGAAGGTTT TTGCGCTGGATGTGGCTGCCCGGCACCGGGTGCAGTTTGCGATGCCGGAGTCTGAT GCGGTTGCGATGCTGAAACAATTATCCTGAGAATAAATGCCTTGGCCTTTATATGGAA ATGTGGAACTGAGTGGATATGCTGTTTTTGTCTGTTAAACAGAGAAGCTGGCTGTTA TCCACTGAGAAGCGAACGAAACAGTCGGGAAAATCTCCCATTATCGTAGAGATCCGC ATTATTAATCTCAGGAGCCTGTGTAGCGTTTATAGGAAGTAGTGTTCTGTCATGATGCCT

Table A2. *Cont.*

	DNA Sequence
pPTGE30 sequencing	GCAAGCGGTAACGAAAACGATTTGAATATGCCTTCAGGAACAATAGAAATCTTCGTGC GGTGTTACGTTGAAGTGGAGCGGATTATGTCAGCAATGGACAGAACAACCTAATGAA CACAGAACCATGATGTGGTCTGTCCTTTTACAGCCAGTAGTGCTCGCCGCAGTCGAG CGACAGGGCGAAGCCCATCGATACTAGCTTGATTGGGATATCTCGCTCGTGCTTGTC GCGTGCTATGTCTTTTTAGGGTACTTTGAACCTACGTTCGTACTTGTGTAATATGATCA TCGTCGTCATCGTATTATCGTTTTTCATCCGTCCAGCGCAAAATGCATTAGCAGCTAGT CCTAGCGTGCGGAGCTACCTGTACAGGTGCATGACGGATGCGTGTCCTTAAGTGAGT TTCTAATTAACAGTAACTTCTTTACTTATGTTTCAGTTTGTAAGAAGCGGGATGCGCTC GTCGCTTGACATCTGATTGGACTGCGTCGGCACGTGAAAACTACATTGTGAAATCTGC TAAAACTCCGGGTATCTCTGACACAAAACGATTCGGCTTCGCAATTTCAACATTACGGT CAAGGCTAACGTATCTTTCTCGGTCAACTTCAGATTATGCCGATTAAATTGTCGTAGCT TTCAAGGCGTTTTGAGTACTGCGGCAGTTGTTGAACCTGCAAGGAGAAGATCTCGAC AACAGAATAAAGCGAAAAATGGGTCTCATGCACTAACACTCAGGCCTCCCTCATAATC TCTGTTTGAGTTTACCAACAACACATATATACATTTCGACAAAATGGCCAAGTTGACCA GTGCCGTTCCGGTGCTCACCGCGCGCGACGTCGCCGGAGCGGTCGAGTTCTGGACC GACCGGCTCGGGTTCTCCCGGGACTTCGTGGAGGACGACTTCGCCGGTGTGGTCCG GGACGACGTGACCCTGTTCATCAGCGCGGTCCAGGACCAGGTGGTGCCAGACAACA CCCTGGCCTGGGTGTGGGTGCGCGGCCTGGACGAGCTGTACGCCGAGTGGTCGGAG GTCGTGTCCACGAACTTCCGGGACGCCTCCGGGCCGGCCATGACCGAGATCGGCGA GCAGCCGTGGGGGCGGGAGTTCGCCCTGCGCGACCCGGCCGGCAACTGCGTGCAC TTCGTGGCCGAGGAGCAGGACTGACCGACGCCGACCAACACCGCCGGTCCGACGC GGCCCGACGGGTCCGAGGCCTCGGAGATCTGGGCCCATGCGGCCGCAACAACTACC TCGACTTTGGCTGGGACACTTTCAGTGAGGACAAGAAGCTTCAGAAGCGTGCTATCG AACTCAACCAGGGACGTGCGGCACAAATGGGCATCCTTGCTCTCATGGTGCACGAAC AGTTGGGAGTCTCTATCCTTCCTTAAAAATTTAATTTTCATTAGTTGCAGTCACTCCGC TTTGGTTTCGTAACTATAACGGTCCTAAGGTAGCGAACGTTGCAGGCCATGCTGTCCA GGCAGGTAGATGACGACCATCAGGGACAGCTTCAAGGATCGCTCGCGGCTCTTACCA GCCTAACTTCGATCATTGGACCGCTGATCGTCACGGCGATTTATGCCGCCTCGGCGAG CACATGGAACGGGTTGGCATGGATTGTAGGCGCCGCCCTATACCTTGTCTGCCTCCCC GCGTTGCGTCGCGGTGCATGGAGCCGGGCCACCTCGACCTGAATGGAAGCCGGCGG CACCTCGCTAACGGATTCACCACTCCAAGAATTGGAGCCAATCAATTCTTGCGGAGAA CTGTGAATGCGCAAACCAACCCTTGGCAGAACATATCCATCGCGTCCGCCATCTCCAG CAGCCGCACGCGGCGCATCGGGGGGGGGGGGGTTTCAATTCATCATTTTTTTTTTATT CTTTTTTTTGATTTCGGTTTCCTTGAAATTTTTTTGATTCGGTAATCTCCGAACAGAAG GAAGAACGAAGGAAGGAGCACAGACTTAGATTGGTATATATACGCATATGTAGTGTTGA AGAAACATGAAATTGCCCAGTATTCTTAACCCAACTGCACAGAACAAAAACCTGCAGG AAACGAAGATAAATCATGTCGAAAGCTACATATAAGGAACGTGCTGCTACTCATCCTAG TCCTGTTGCTGCCAAGCTATTTAATATCATGCACGAAAAGCAAACAAACTTGTGTGCTT CATTGGATGTTCGTACCACCAAGGAATTACTGGAGTTAGTTGAAGCATTAGGTCCCAAA ATTTGTTTACTAAAAACACATGTGGATATCTTGACTGATTTTTCCATGGAGGGCACAGTT AAGCCGCTAAAGGCATTATCCGCCAAGTACAATTTTTTACTCTTCGAAGACAGAAAATTT GCTGACATTGGTAATACAGTCAAATTGCAGTACTCTGCGGGTGTATACAGAATAGCAGA ATGGGCAGACATTACGAATGCACACGGTGTGGTGGGCCCAGGTATTGTTAGCGGTTTG AAGCAGGCGGCGGAAGAAGTAACAAAGGAACCTAGAGGCCTTTTGATGTTAGCAGAAT TGTCATGCAAGGGCTCCCTAGCTACTGGAGAATAT
pSteelyA-1 sequencing	TTCGATGCGGCCGCAAGGGGTTCGCGTCAGCGGGTGTTGGCGGGTGTCGGGGCTGG CTTAACTATGCGGCATCAGAGCAGATTGTACTGAGAGTGCACCATATGCGGTGTGAAA TACCACACAGATGCGTAAGGAGAAAATACCGCATCAGGCGCCATTCGCCATTCAGCTG CGCAACTGTTGGGAAGGGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAGCTGGCG AAAGGGGGATGTGCTGCAAGGCGATTAAGTTGGGTAACGCCAGGGTTTTCCCAGTCA CGACGTTGTAAAACGACGGCCAGTGAATTGTAATACGACTCACTATAGGGCGAATTCG AGCTCGGTACCCGGGGATCCTCTAGAGTCGACCTGCAGGCATGCAAGCTTGAGTATT CTATAGTCTCACCTAAATAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTGTGAAA TTGTTATCCGCTCACAATTCCACACAACATACGAGCCGGAAGCATAAAGTGTAAAGCC TGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCTCACTGCCCGCTT

Table A2. *Cont.*

	DNA Sequence
pSteelyA-1 sequencing	TCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAATGAATCGGCCAACGCGAACCCC TTGCGGCCGCCCGGGCCGTCGACCAATTCTCATGTTTGACAGCTTATCATCGAATTTC TGCCATTCATCCGCTTATTATCACTTATTCAGGCGTAGCAACCAGGCGTTTAAGGGCAC CAATAACTGCCTTAAAAAAATTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAA TTCATTAAGCATTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCTGAATCG CCAGCGGCATCAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGGG GGCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAACTGGTGAAACTCACCCAG GGATTGGCTGAGACGAAAAACATATTCTCAATAAACCCTTTAGGGAAATAGGCCAGGTT TTCACCGTAACACGCCACATCTTGCGAATATATGTGTAGAAACTGCCGGAAATCGTCGT GGTATTCACTCCAGAGCGATGAAAACGTTTCAGTTTGCTCATGGAAAACGGTGTAACA AGGGTGAACACTATCCCATATCACCAGCTCACCGTCTTTCATTGCCATACGAAATTCCG GATGAGCATTCATCAGGCGGGCAAGAATGTGAATAAAGGCCGGATAAAACTTGTGCTT ATTTTTCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGGTCTGGTTATAGG TACATTGAGCAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATTGGGATATAT CAACGGTGGTATATCCAGTGATTTTTTTCTCCATTTTAGCTTCCTTAGCTCCTGAAAATC TCGATAACTCAAAAAATACGCCCGGTAGTGATCTTATTTCATTATGGTGAAAGTTGGAA CCTCTTACGTGCCGATCAACGTCTCATTTTCGCCAAAAGTTGGCCCAGGGCTTCCCG GTATCAACAGGGACACCAGGATTTATTTATTCTGCGAAGTGATCTTCCGTCACAGGTA TTTATTCGCGATAAGCTCATGGAGCGGCGTAACCGTCGCACAGGAAGGACAGAGAAA GCGCGGATCTGGGAAGTGACGGACAGAACGGTCAGGACCTGGATTGGGGAGGCGGT TGCCGCCGCTGCTGCTGACGGTGTGACGTTCTCTGTTCCGGTCACACCACATACGTTC CGCCATTCCTATGCGATGCACATGCTGTATGCCGGTATACCGCTGAAAGTTCTGCAAAG CCTGATGGGACATAAGTCCATCAGTTCAACGGAAGTCTACACGAAGGTTTTTGCGCTG GATGTGGCTGCCCGGCACCGGGTGCAGTTTGCGATGCCGGAGTCTGATGCGGTTGCG ATGCTGAAACAATTATCCTGAGAATAAATGCCTTGGCCTTTATATGGAAATGTGGAACTG AGTGGATATGCTGTTTTTGTCTGTTAAACAGAGAAGCTGGCTGTTATCCACTGAGAAGC GAACGAAACAGTCGGGAAAATCTCCCATTATCGTAGAGATCCGCATTATTAATCTCAGGA GCCTGTGTAGCGTTTATAGGAAGTAGTGTTCTGTCATGATGCCTGCAAGCGGTAACGAA AACGATTTGAATATGCCTTCAGGAACAATAGAAATCTTCGTGCGGTGTTACGTTGAAGTG GAGCGGATTATGTCAGCAATGGACAGAACAACCTAATGAACACAGAACCATGATGTGGT CTGTCCTTTTACAGCCAGTAGTGCTCGCCGCAGTCGAGCGACAGGGCGAAGCCCATCG ATACTAGCTTGATTGGGATATCTCGCTCGTGCTTGTCGCGTGCTATGTCTTTTTAGGGTA CTTTGAACCTACGTTCGTACTTGTGTAATATGATCATCGTCGTCATCGTATTATCGTTTTT CATCCGTCCAGCGCAAAATGCATTAGCAGCTAGTCCTAGCGTGCGGAGCTACCTGTACA GGTGCATGACGGATGCGTGTCCTTAAGTGAGTTTCTAATTAACAGTAACTTCTTTACTTA TGTTTCAGTTTGTAAGAAGCGGGATGCGCTCGTCGCTTGACATCTGATTGGACTGCGT CGGCACGTGAAAACTACATTGTGAAATCTGCTAAAACTCCGGGTATCTCTGACACAAAA CGATTCGGCTTCGCAATTTCAACATTACGGTCAAGGCTAACGTATCTTTCTCGGTCAAC TTCAGATTATGCCGATTAAATTGTCGTAGCTTTCAAGGCGTTTTGAGTACTGCGGCAGT TGTTGAACCTGCAAGGAGAAGATCTCGACAACAGAATAAAGCGAAAAATGGGTCTCAT GCACTAACACTCAGGCCTCCCTCATAATCTCTGTTTGAGTTTACCAACAACACATATATA CATTTCGACAAAATGGCCAAGTTGACCAGTGCCGTTCCGGTGCTCACCGCGCGCGAC GTCGCCGGAGCGGTCGAGTTCTGGACCGACCGGCTCGGGTTCTCCCGGGACTTCGT GGAGGACGACTTCGCCGGTGTGGTCCGGGACGACGTGACCCTGTTCATCAGCGCGG TCCAGGACCAGGTGGTGCCAGACAACACCCTGGCCTGGGTGTGGGTGCGCGGCCTG GACGAGCTGTACGCCGAGTGGTCGGAGGTCGTGTCCACGAACTTCCGGGACGCCTC CGGGCCGGCCATGACCGAGATCGGCGAGCAGCCGTGGGGGCGGGAGTTCGCCCTG CGCGACCCGGCCGGCAACTGCGTGCACTTCGTGGCCGAGGAGCAGGACTGACCGA CGCCGACCAACACCGCCGGTCCGACGCGGCCCGACGGGTCCGAGGCCTCGGAGAT CTGGGCCCATGCGGCCGCAACAACTACCTCGACTTTGGCTGGGACACTTTCAGTGA GGACAAGAAGCTTCAGAAGCGTGCTATCGAACTCAACCAGGGACGTGCGGCACAAA TGGGCATCCTTGCTCTCATGGTGCACGAACAGTTGGGAGTCTCTATCCTTCCTTAAA AATTTAATTTTCATTAGTTGCAGTCACTCCGCTTTGGTTTCGTAACTATAACGGTCCTA AGGTAGCGAACGTTGCAGGCCATGCTGTCCAGGCAGGTAGATGACGACCATCAGGG ACAGCTTCAAGGATCGCTCGCGGCTCTTACCAGCCTAACTTCGATCATTGGACCGCT

Table A2. *Cont.*

	DNA Sequence
pSteelyA-1 sequencing	GATCGTCACGGCGATTTATGCCGCCTCGGCGAGCACATGGAACGGGTTGGCATGGAT TGTAGGCGCCGCCCTATACCTTGTCTGCCTCCCCGCGTTGCGTCGCGGTGCATGGAG CCGGGCCACCTCGACCTGAATGGAAGCCGGCGGCACCTCGCTAACGGATTCACCAC TCCAAGAATTGGAGCCAATCAATTCTTGCGGAGAACTGTGAATGCGCAAACCAACCC TTGGCAGAACATATCCATCGCGTCCGCCATCTCCAGCAGCCGCACGCGGCGCATCG GGGGGGGGGGGGGGGTTTCAATTCATCATTTTTTTTTATTCTTTTTTTTTGATTTCGG TTTCCTTGAAATTTTTTTGATTCGGTAATCTCCGAACAGAAGGAAGAACGAAGGAA GGAGCACAGACTTAGATTGGTATATATACGCATATGTAGTGTTGAAGAAACATGAAA TTGCCCAGTATTCTTAACCCAACTGCACAGAACAAAAACCTGCAGGAAACGAAGAT AAATCATGTCGAAAGCTACATATAAGGAACGTGCTGCTACTCATCCTAGTCCTGTTG CTGCCAAGCTATTTAATATCATGCACGAAAAGCAAACAAACTTGTGTGCTTCATTGG ATGTTCGTACCACCAAGGAATTACTGGAGTTAGTTGAAGCATTAGGTCCCAAAATTT GTTTACTAAAAACACATGTGGATATCTTGACTGATTTTTCCATGGAGGGCACAGTTA AGCCGCTAAAGGCATTATCCGCCAAGTACAATTTTTTACTCTTCGAAGACAGAAAAT TTGCTGACATTGGTAATACAGTCAAATTGCAGTACTCTGCGGGTGTATACAGAATAG CAGAATGGGCAGACATTACGAATGCACACGGTGTGGTGGGCCCAGGTATTGTTAGC GGTTTGAAGCAGGCGGCGGAAGAAGTAACAAAGGAACCTAGAGGCCTTTTGATGT TAGCAGAATTGTCATGCAAGGGCTCCCTAGCTACTGGAGAATATACTAAGGGTACTG TTGACATTGCGAAGAGCGACAAAGATTTTGTTATCGGCTTTATTGCTCAAAGAGACA TGGGTGGAAGAGATGAAGGTTACGATTGGTTGATTATGACACCCGGTGTGGGTTTAG ATGACAAGGGAGACGCATTGGGTCAACAGTATAGAACCGTGGATGATGTGGTCTCTA CAGGATCTGACATTATTATTGTTGGAAGAGGACTATTTGCAAAGGGAAGGGATGCTA AGGTAGAGGGTGAACGTTACAGAAAAGCAGGCTGGGAAGCATATTTGAGAAGATGC GGCCAGCAAAACTAAAAAACTGTATTATAAGTAAATGCATGTATACTAAACTCACAAAT TAGAGCTTCAATTTAATTATATCAGTTATTACCCGGCCGGGAATCTCGGTCGTAATGAT TTTTATAATGACGAAAAAAAAAAAAAATTGGAAAGAAAACCCCCCCCCCCCCCCGCA GCGTTGGGTCCTGGCCACGGGTGCGCATGATCGTGCTCCTGTCGTTGAGGACCCGG CTAGGCTGGCGGGGTTGCCTTACTGGTTAGCAGAATGAATCACCGATACGCGAGCGA ACGTGAAGCGACTGCTGCTGCAAAACGTCTGCGACCTGAGCAACAACATGAATGGT CTTCGGTTTCCGTGTTTCGTAAAGTCTGGAAACGCGGAAGTCAGCGCCCTGCACCA TTATGTTCCGGATCTGCATCGCAGGATGCTGCTGGCTACCCTGTGGAACACCTACATC TGTATTAACGAAGCGCTGGCATTGACCCTGAGTGATTTTTCTCTGGTCCCGCCGCATC CATACCGCCAGTTGTTTACCCTCACAACGTTCCAGTAACCGGGCATGTTCATCATCAG TAACCCGTATCGTGAGCATCCTCTCTCGTTTCATCGAGTTACGCTAGGGATAACAGGG TAATATAGATCTTCCGCTGCATAACCCTGCTTCGGGGTCATTATAGCGATTTTTTCGGT ATATCCATCCTTTTTCGCACGATATACAGGATTTTGCCAAAGGGTTCGTGTAGACTTTC CTTGGTGTATCCAACGGCGTCAGCCGGGCAGGATAGGTGAAGTAGGCCCACCCGCGA GCGGGTGTTCCTTCTTCACTGTCCCTTATTCGCACCTGGCGGTGCTCAACGGGAATC CTGCTCTGCGAGGCTGGCCGGCTACCGCCGGCGTAACAGATGAGGGCAAGCGGATG GCTGATGAAACCAAGCCAACCAGGAAGGGCAGCCCACCTATCAAGGTGTACTGCCT TCCAGACGAACGAAGAGCGATTGAGGAAAAGGCGGCGGCGGCCGGCATGAGCCTG TCGGCCTACCTGCTGGCCGTCGGCCAGGGCTACAAAATCACGGGCGTCGTGGACTAT GAGCACGTCCGCGAGCTGGCCCGCATCAATGGCGACCTGGGCCGCCTGGGCGGCCT GCTGAAACTCTGGCTCACCGACGACCCGCGCACGGCGCGGTTCGGTGATGCCACGA TCCTCGCCCTGCTGGCGAAGATCGAAGAGAAGCAGGACGAGCTTGGCAAGGTCATG ATGGGCGTGGTCCGCCCGAGGGCAGAGCCATGACTTTTTTAGCCGCTAAAACGGCC GGGGGGTGCGCGTGATTGCCAAGCACGTCCCCATGCGCTCCATCAAGAAGAGGCAC TTCGAGCTGTAAGTACATCACCGACGAGCAAGGCAAGACGATCCGCGCCTGTTTTAT TGAGAACGTTGTTCGTGTTGGCCTCAATGGTAGCGATGCGTCATTCAGCGAAGTTCT GGTGCTGATGATGTGGTTCGCTTTGCCACTGGTCAATGTGGTAAGCCCGTGTAATGT CAGTAACCTTTTTACTGATCTCAGCTTGAGCACGGTCGCTGATGAGCTTATCCATGGC CCCACGGTAACGGATATGATCCTCTAGGGCGTTGACAAATTCTTTGTCGGTTTTCATG GGGTAGACGTCAGTGACCAGGGAACGTCTCCCTACAAAAAGTTGCGCATACTTTGCT CCGTTGTCGACGGCAGGGGTGTCGGACCAGATTGTATCTGTGGCAACGGCCTCATTG CGTCAATGGACCTTTAAAGCCGGGAAACGAGACTTGAAATGTTTACGTAGAGGTGCA

Table A2. *Cont.*

	DNA Sequence
pSteelyA-1 sequencing	TTATAGACCTCACGCGCATATTGAGTGGTTGCAAAAATGGTTTTGCGAACGGTATCAC TGGAGACCCATGCCAGGCAAGGACGGAGGGCATCATAATCATGTTCATTGCGTTGGA CAGCATGCTTGTTACACGTAAGTATACGGTCGAGAGCATCGTGACGTTGAGAATTACA GATGGCAACGTGTCGGTGCATGTATTGGCCGAGATTGTCAAATCGTGGCTCAATATAT GGCATGCCAGGTAAGTCATGGATGTCGGTATGCCATTCAGCCTTCATGTCGATTTCGT TGTCGAGAACTGATGGGTCCCAGTCAACGTCAGAAGTAAGAACAACATGGGGAAGG GAATGAAGTTCATGACTGGTGGGTGCGCGCATATCCATGTACGGAAGACCCTGTCGT ATGTTTAGTGGGATGATGTAATCATCCAGGGTAACAATACGTTGGTTGCCGCCCACGG TACGAGACCGATCTTGAACACAATTGTGGCAATGTTCAAGTTGGGCGCTGGAATGGA TGGTTTTACCTTTACCAAGATGCGCGTATTGATGCATGATAACAACAATGGGCCCTCG TTGCGATTCGACAAGACCGGCAGCCGTGACAATGTCTAGATTGGACAAGGTATGTTC ATTTATACCGGTTATGTTGGCTGAACGTCCAGTTTTGTGCAGTACGGTAACATCACTC CCCGCAAGTCCACCGTTGGCACCGCGATCGACAAGTGCAGATGTGGTATTTTGTACT GTGTGTCGGGAGACTTGGTACTGTAACACATTTGACTGAAGTGACTTGGTGGTACCA TGAGGACGGAGGGAACCCGTTGATACGGTGTTGCGTGACGCTGCAAGTACCTTACG TATGTCGCCTGGATCCATACGTCCAACCCGATCAGAAAGATGTGCTAGGAGTTCCGT TTCTGGTGCACAATCATGAAAGGTATCCACGGGAGTTCCATTGTTGTCGTCCGGGG CTGCGTCGCGACTGCCAGTTGCATGTACATGCGCCATCAAGGGACGTGCCAATCCA TTACTAACCGGGAGAACCTTAGCTGGGGCAGCCAATCCCTGAAGTATAGCCTTAGCA TCATCTGAGAGCTGGTTCCACATATCTCTAGGGATATAAGGTCGTTCACGGTTAGTG GGCGTACTATGATGTCGGTTATTAGTACAATTCTCCCTGCGGGCATGCGCATTGGCT TCATAGAGTACGGAAGGTGACAAGTCAATATTGTAGTTAACATCCGGATCAGTGTC AAAGTCTGTAGGATGGTAAGAAAGATCAGTAGAATGAATACTACGCTTTTCCTTGG GACTACGGGAATTAGAGAAGTTGTTTCCTTTATTGTAGAGTGACGCTGAAGCAAGT AGAAGACTAAGGTAACTCTCGTAGCTAATAGGATTACCTCCTTTGGCTAGGTCAAG AGTGGCTGTGATCTTCACTTGACAAAGTTCCGGTACATTGTGGACAGCATTCTCC AAAAGACTAAGACACAGTTGCTTTGGGAGTTGCTCAGCCATTGGTACAGTATTGT GGTAGATACAAAGGTGGTTCTTCCAATGAAGGATAAATCCTTCTGCTGTGCCTGTC CATGAGGATCCATATTTCGCCGTAGTTAGGTAACCAAGCGTGGTGGCTGAACTGAT CTTCGCACTTGCTGATTCCGTATAGTGTTTGACAACTTTACAAAACACTTCTTGCG CAGTTCGCTCTAGCCTGGACAGAGAAGGGACAATCTTCGTCGTTAAGACTCGTGC GAATAGCAAAAGATCACAAAATAGCACATCGGCACCGACCAACGATTATTTCCAAG GAAAAAAAGAATGCTTCACTACAAGAAATTGTGTCATCCCTATACAGAGTCTTGTT ACTGTGACAGAAAATTGATGGAAGATGTGGCGGATTGCCTTTACACTAGCCAACTT GTTCGACTAATTGCAGCTTCTTCTGAGAGGCTTCACCGAGTAACGCGAAGAACAC CGGTGTCTCGTACATGCTCGTCGGTGAACGCTCGTCCAATGACACCCCCCACTTT GTATCAATATCCCAACTTGGTAGTGAACTGGAATGATACATGCAATTTCGCGCCGCA TCAACAGCCACGGGCACCATCGACGAATAGACTCGGTCGAGCTGGTTGCCCTCGC CGCTGGGCTGGCGGCCGTCTATGGCCCTGCAAACGCGCCAGAAACGCCGTCGAAG CCGTGTGCGAGACACCGCGGCCGGCCGCCGGCGTTGTGGATACCTCGCGGAAAA CTTGGCCCTCACTGACAGATGAGGGGCGGACGTTGACACTTGAGGGGCCGACTC ACCCGGCGCGGCGTTGACAGATGAGGGGCAGGCTCGATTTCGGCCGGCGACGTG GAGCTGGCCAGCCTCGCAAATCGGCGAAAACGCCTGATTTTACGCGAGTTTCCCA CAGATGATGTGGACAAGCCTGGGGATAAGTGCCCTGCGGTATTGACACTTGAGGG GCGCGACTACTGACAGATGAGGGGCGCGATCCTTGACACTTGAGGGGCAGAGTG CTGACAGATGAGGGGCGCACCTATTGACATTTGAGGGGCTGTCCACAGGCAGAAA ATCCAGCATTTGCAAGGGTTTCCGCCCGTTTTTCGGCCACCGCTAACCTGTCTTTT AACCTGCTTTTAAACCAATATTTATAAACCTTGTTTTTAACCAGGGCTGCGCCCTGT GCGCGTGACCGCGCACGCCGAAGGGGGGTGCCCCCCCTTCTCGAACCCTCCCGG TCGAGTGAGCGAGGAAGCACCAGGGAACAGCACTTATATATTCTGCTTACACACGA TGCCTGAAAAAACTTCCCTTGGGGTTATCCACTTATCCACGGGGATATTTTTATAATT ATTTTTTTTATAGTTTTTAGATCTTCTTTTTTTAGAGCGCCTTGTAGGCCTTTATCCATG CTGGTTCTAGAGAAGGTGTTGTGACAAATTGCCCTTTCAGTGTGACAAATCACCCT CAAATGACAGTCCTGTCTGTGACAAATTGCCCTTAACCCTGTGACAAATTGCCCTC AGAAGAAGCTGTTTTTTCACAAAGTTATCCCTGCTTATTGACTCTTTTTTATTTAGT

Table A2. *Cont.*

	DNA Sequence
pSteelyA-1 sequencing	GTGACAATCTAAAAACTTGTCACACTTCACATGGATCTGTCATGGCGGAAACAGCG GTTATCAATCACAAGAAACGTAAAAATAGCCCGCGAATCGTCCAGTCAAACGACCT CACTGAGGCGGCATATAGTCTCTCCCGGGATCAAAAACGTATGCTGTATCTGTTCG TTGACCAGATCAGAAAATCTGATGGCACCCTACAGGAACATGACGGTATCTGCGA GATCCATGTTGCTAAATATGCTGAAATATTCGGATTGACCTCTGCGGAAGCCAGTA AGGATATACGGCAGGCATTGAAGAGTTTCGCGGGGAAGGAAGTGGTTTTTTATCG CCCTGAAGAGGATGCCGGCGATGAAAAAGGCTATGAATCTTTTCCTTGGTTTATC AAACGTGCGCACAGTCCATCCAGAGGGCTTTACAGTGTACATATCAACCCATATC TCATTCCCTTCTTTATCGGGTTACAGAACCGGTTTACGCAGTTTCGGCTTAGTGA AACAAAAGAAATCACCAATCCGTATGCCATGCGTTTATACGAATCCCTGTGTCAG TATCGTAAGCCGGATGGCTCAGGCATCGTCTCTCTGAAAATCGACTGGATCATAG AGCGTTACCAGCTGCCTCAAAGTTACCAGCGTATGCCTGACTTCCGCCGCCGCT TCCTGCAGGTCTGTGTTAATGAGATCAACAGCAGAACTCCAATGCGCCTCTCAT ACATTGAGAAAAAGAAAGGCCGCCAGACGACTCATATCGTATTTTCCTTCCGCG ATATCACTTCCATGACGACAGGATAGTCTGAGGGTTATCTGTCACAGATTTGAGG GTGGTTCGTCACATTTGTTCTGACCTACTGAGGGTAATTTGTCACAGTTTTGCTG TTTCCTTCAGCCTGCATGGATTTTCTCATACTTTTTGAACTGTAATTTTTAAGGAA GCCAAATTTGAGGGCAGTTTGTCACAGTTGATTTCCTTCTCTTTCCCTTCGTCAT GTGACCTGATATCGGGGGTTAGTTCGTCATCATTGATGAGGGTTGATTATCACAG TTTATTACTCTGAATTGGCTATCCGCGTGTGTACCTCTACCTGGAGTTTTTCCCA CGGTGGATATTTCTTCTTGCGCTGAGCGTAAGAGCTATCTGACAGAACAGTTCT TCTTTGCTTCCTCGCCAGTTCGCTCGCTATGCTCGGTTACACGGCTGCGGCGAG CATCACGTGCTATAAAAATAATTATAATTTAAATTTTTTAATATAAATATATAAATTAA AAATAGAAAGTAAAAAAAGAAATTAAAGAAAAAATAGTTTTTGTTTTCCGAAGAT GTAAAAGACTCTAGGGGGATCGCCAACAAATACTACCTTTTACCTTGCTCTTCC TGCTCTCAGGTATTAATGCCGAATTGTTTCATCTTGTCTGTGTAGAAGACCACAC ACGAAAATCCTGTGATTTTACATTTTACTTATCGTTAATCGAATGTATATCTATTTAA TCTGCTTTTCTTGTCTAATAAATATATATGTAAAGTACGCTTTTTGTTGAAATTTTT TAAACCTTTGTTTATTTTTTTTTCTTCATTCCGTAACTCTTCTACCTTCTTTATTTA CTTTCTAAAATCCAAATACAAAACATAAAAATAAATAAACACAGAGTAAATTCCCA AATTATTCCATCATTAAAAGATACGAGGCGCGTGTAAGTTACAGGCAAGCGATCC TAGTACACTCTATATTTTTTTATGCCTCGGTAATGATTTTCATTTTTTTTTTCCACC TAGCGGATGACTCTTTTTTTTTCTTAGCGATTGGCATTATCACATAATGAATTATAC ATTATATAAAGTAATGTGATTTCTTCGAAGAATATACTAAAAAATGAGCAGGCAAG ATAAACGAAGGCAAAGATGACAGAGCAGAAAGCCCTAGTAAAGCGTATTACAAA TGAAACCAAGATTCAGATTGCGATCTCTTTAAAGGGTGGTCCCCTAGCGATAGA GCACTCGATCTTCCCAGAAAAAGAGGCAGAAGCAGTAGCAGAACAGGCCACAC AATCGCAAGTGATTAACGTCCACACAGGTATAGGGTTTCTGGACCATATGATACA TGCTCTGGCCAAGCATTCCGGCTGGTCGCTAATCGTTGAGTGCATTGGTGACTT ACACATAGACGACCATCACACCACTGAAGACTGCGGGATTGCTCTCGGTCAAG CTTTTAAAGAGGCCCTAGGGGCCGTGCGTGGAGTAAAAAGGTTTGGATCAGGA TTTGCGCCTTTGGATGAGGCACTTTCCAGAGCGGTGGTAGATCTTTCGAACAG GCCGTACGCAGTTGTCGAACTTGGTTTGCAAAGGGAGAAAGTAGGAGATCTCT CTTGCGAGATGATCCCGCATTTTCTTGAAAGCTTTGCAGAGGCTAGCAGAATTA CCCTCCACGTTGATTGTCTGCGAGGCAAGAATGATCATCACCGTAGTGAGAGT GCGTTCAAGGCTCTTGCGGTTGCCATAAGAGAAGCCACCTCGCCCAATGGTA CCAACGATGTTCCCTCCACCAAAGGTGTTCTTATGTAGTTTTACACAGGAGTCT GGACTTGACATACAGTGAATGTAACTTTCGAATTGACAGTATTAGTAGTCGTATT GACAGTGAGGCACGCCCCTCAATGTGCGAGGTGGAAAATATACCAGCATGACA ATGAATCTTGGAGATTCTTTTGCTGTCATCAAGATTCACCGCCAAATCTTCAGG AACCTATCACGTCCACAGGCGATGTTAATTCTTGAGTCGTCAAAACAAAGTCC TGTCCTACCTGTAGAAGTTGACAGCGAGCAATTGTATGCAAACTTCTGACTTT GTTATAATAACATTAAAGGTAATTAAGTATCTTCAATTAGGCATTTTGTCACTGT CAGTCCGTTCCGACAATATAGGTAGATTTGGAATGAATCTTTTCTATGCTGCTG CGAATCTTGTACACCTTTGAGGCCGTAGATTCTGTCCGACGAAGCGATAATTAT

Table A2. *Cont.*

	DNA Sequence
pSteelyA-1 sequencing	TGCAAAATACATGGACTCATTATTTTGATTCGATTTCTTTTTGGTATCCGACTCG AAAAGATCCATCACGGCGAGCGCCACCATGAACAAGAACTCCAAAATCCAGTC CCCAAACTCTTCTGATGTTGCTGTTATTGGTGTTGGTTTTAGATTCCCAGGTAA CTCTAATGACCCAGAATCTTTGTGGAACAACTTGTTGGATGGTTTCGATGCTAT TACCCAAGTCCCAAAAGAAAGATGGGCTACTTCTTTTAGAGAGATGGGTTTGA TCAAGAACAAGTTCGGTGGTTTCTTGAAGGATTCTGAATGGAAGAATTTCGAC CCTTTGTTCTTTGGTATCGGTCCAAAAGAAGCTCCATTCATTGATCCACAACAA AGGTTGTTGTTGTCCATCGTTTGGGAATCTTTGGAAGATGCTTACATCAGACCA GATGAATTGAGAGGTTCTAACACTGGTGTTTTCATCGGTGTTTCTAACAACGAT TACACCAAGTTGGGTTTCCAAGACAACTACTCTATTTCTCCATACACTATGACCG GCTCTAACTCTTCATTGAACTCCAACAGAATTTCCTACTGCTTCGATTTTAGAGG TCCATCCATTACTGTTGATACCGCTTGTTCTTCTTCCTTGGTTTCTGTTAATTTG GGTGTCCAATCCATCCAAATGGGTGAATGTAAGATTGCTATTTGCGGTGGTGTTA ACGCTTTGTTTGATCCATCTACATCTGTTGCCTTTTCCAAGTTGGGTGTTTTGTC TGAAAATGGCAGATGCAACTCTTTTAGTGATCAAGCCTCTGGTTACGTTAGATCT GAAGGTGCTGGTGTTGTTGTTTTGAAGTCTTTGGAACAAGCTAAGTTGGATGGT GATAGAATCTACGGTGTTATCAAGGGTGTTTCCTCTAATGAAGATGGTGCTTCTAA TGGTGACAAGAACTCTTTGACTACTCCATCTTGTGAAGCCCAATCCATTAACATT TCTAAGGCTATGGAAAAGGCCTCCTTGTCTCCATCTGATATCTATTACATTGAAGC CCATGGTACTGGTACTCCAGTTGGTGATCCAATTGAAGTTAAGGCCTTGTCCAAG ATCTTCTCCAACTCTAACAACAACCAGTTGAACAACTTCTCTACCGATGGTAATGA TAACGATGATGATGATGACGATAACACCTCTCCAGAACCATTATTGATTGGCTCAT TCAAGTCCAACATCGGTCATTTGGAATCTGCTGCTGGTATTGCTTCTTTGATTAAG TGTTGCTTGATGTTGAAGAACAGGATGTTGGTTCCATCCATTAACTGCTCTAATTT GAACCCATCCATTCCATTCGATCAGTACAACATCTCCGTTATCAGAGAAATCAGAC AATTCCCAACCGATAAGTTGGTTAACATCGGTATCAATTCTTTCGGTTTCGGTGGT TCTAACTGCCATTTGATTATTCAAGAGTACAACAACAACTTCAAGAACAACTCTAC CATCTGCAATAACAACAACAACAACAATAACAACATCGACTACTTGATCCCAATCT CCTCTAAGACTAAGAAGTCCTTGGATAAGTACTTGATTTTGATCAAGACCAACTCC AACTACCACAAGGATATTTCTTTCGATGACTTCGTCAAGTTCCAAATCAAGTCTAA GCAGTACAACTTGTCCAACAGAATGACTACCATTGCTAACGATTGGAACTCCTTCA TTAAGGGTTCTAACGAATTCCACAACTTGATCGAATCTAAGGATGGTGAAGGTGGT TCTTCATCTTCTAACAGAGGTATTGATTCCGCCAATCAAATCAACACTACTACTACC TCTACCATCAACGATATCGAACCTTTGTTGGTTTTCGTTTTCTGTGGTCAAGGTCCA CAATGGAATGGTATGATTAAGACCTTGTACAACTCCGAGAACGTTTTCAAGAACACC GTTGATCATGTTGACAGCATCTTGTACAAGTACTTCGGTTACTCCATTTTGAACGTC TTGTCTAAGATCGATGATAACGACGATTCCATCAACCATCCAATAGTTGCTCAACCAT CTTTGTTCTTGTTGCAAATTGGTTTGGTCGAGTTGTTTAAGTACTGGGGTATCTACC CATCTATCTCTGTTGGTCATTCTTTCGGTGAAGTCTCTTCTTATTACTTGTCCGGTAT CATCTCTTTGGAAACCGCTTGTAAAATCGTCTACGTCAGATCCTCTAATCAGAACAA AACTATGGGTTCCGGTAAGATGTTGGTTGTTTCTATGGGTTTTAAGCAATGGAACGA TCAATTCTCTGCTGAATGGTCCGATATTGAAATTGCTTGTTACAACGCTCCAGATTC CATAGTTGTTACTGGTAACGAAGAAAGATTGAAAGAATTGTCCATCAAGTTGTCCG ACGAATCCAATCAAATTTTCAACACCTTCTTGAGGTCCCCATGTTCTTTTCATTCTT CCCATCAAGAAGTCATCAAGGGTTCTATGTTCGAAGAGTTGTCTAACTTGCAATCT ACTGGTGAAACCGAAATCCCTTTGTTCTCTACTGTTACTGGTAGACAAGTTTTGTC TGGTCATGTTACTGCTCAACACATCTACGATAATGTTAGAGAACCAGTCTTGTTCC AAAAGACGATTGAATCCATTACCTCCTACATCAAGTCTCACTACCCATCCAATCAAA AGGTTATCTACGTTGAAATTGCTCCACACCCAACCTTGTTTTCATTGATCAAAAAG TCCATCCCATCCTCCAACAAGAATTCCTCTTCTGTTTTGTGTCCATTGAACAGAAA AGAAAACTCCAACAACTCCTACAAGAAGTTCGTTTCTCAGTTGTACTTCAACGGT GTTAACGTTGACTTCAACTTCCAGTTGAACTCCATTTGCGATAACGTTAACAACGA TCACCATTTGAACAACGTCAAGCAAAACTCCTTCAAAGAGACTACCAATTCCTTG CCAAGATACCAATGGGAACAAGATGAATATTGGTCCGAACCATTGATCTCCAGAA AGAATAGATTGGAAGGTCCAACTACTTCCTTGTTGGGTCATAGAATTATCTACAGC

Table A2. *Cont.*

	DNA Sequence
pSteelyA-1 sequencing	TTCCCAGTTTTCCAATCCGTTTTGGACTTGCAATCTGACAACTACAAATACTTGTT GGACCACTTGGTTAACGGTAAGCCAGTTTTTCCAGGTGCTGGTTATTTGGATATC ATCATCGAATTCTTCGACTACCAAAAGCAGCAGTTGAATTCCTCTGATTCCTCTAA CTCCTACATCATCAACGTTGACAAGATCCAATTCTTGAACCCAATTCACTTGACCG AAAACAAGTTGCAAACCTTGCAATCTTCTTTCGAACCTATCGTTACTAAGAAGTCT GCCTTCTCTGTTAACTTCTTCATCAAGGATACCGTCGAGGATCAATCTAAGGTTAA GTCTATGTCTGACGAAACTTGGACTAACACTTGTAAGGCTACCATTTCCTTGGAAC AACAACAGCCATCTCCATCTTCTACTTTGACTTTGTCTAAGAAGCAAGACTTGCAG ATCTTGAGAAACAGATGCGATATTAGCAAGCTAGACAAGTTTGAGTTGTACGACAA GATCTCTAAGAATTTGGGCTTGCAGTACAACTCCTTGTTTCAAGTTGTTGATACCAT CGAAACTGGTAAGGATTGCTCTTTTGCTACTTTGTCTTTGCCAGAAGATACTTTGTT CACCACCATTTTGAACCCATGCTTGTTGGATAACTGTTTCCATGGTTTGTTGACCTT GATCAACGAAAAGGGTTCTTTCGTTGTCGAGTCCATTTCTTCTGTTTCTATCTACTT GGAGAACATCGGTTCCTTCAATCAAACTTCTGTTGGTAACGTCCAGTTCTACTTGTA CACCACTATTTCTAAAGCCACCTCCTTTAGTTCTGAAGGTACTTGTAAGTTGTTCAC CAAGGATGGTTCCTTGATTTTGTCTATCGGTAAGTTCATCATCAAGTCCACCAATCC AAAGTCTACTAAGACCAACGAAACTATCGAATCTCCATTGGACGAAACCTTCTCTAT TGAATGGCAATCTAAGGATTCTCCAATTCCAACCCCACAACAAATCCAACAACAATC TCCATTGAACTCTAACCCATCCTTCATTAGATCTACCATCTTGAAGGACATCCAGTTC GAACAATACTGCTCCTCCATTATCCACAAAGAATTGATCAACCACGAAAAGTACAAG AACCAGCAATCCTTCGATATCAACTCCTTGGAAAACCACTTGAACGATGACCAATTG ATGGAATCCTTGTCCATCTCCAAAGAATACTTGAGATTCTTCACCAGGATCATCTCCA TCATTAAGCAATACCCAAAGATCTTGAACGAAAAAGAGCTAAAAGAATTGAAAGAAA TCATCGAATTGAAGTACCCATCCGAAGTTCAGTTGTTGGAATTCGAAGTTATCGAGA AGGTGTCCATGATTATCCCAAAGTTGTTGTTCGAAAACGACAAGCAATCTTCCATGA CCTTGTTCCAAGATAACTTGTTGACCAGGTTCTACTCCAATTCTAACTCTACCAGAT TCTACTTGGAAAGGGTTTCCGAAATGGTCTTGGAATCTATTAGACCAATCGTCAGAG AAAAGAGGGTGTTCAGAATTTTGGAAATTGGTGCTGATACAGCCTCTTTGTCTAATG TTGTTTTGACTAAGTTGAACACCTACTTGTCCACCTTGAATTCTAATGGTGGTTCTG GTTACAACATCATCATTGAGTACACCTTCACCGATATTTCCGCCAACTTCATTATTGG TGAAATCCAAGAAACCATGTGCAACTTGTACCCAAACGTTACTTTCAAGTTCTCCGT CTTGGACTTGGAGAAAGAGATTATTAACTCCTCCGATTTCTTGATGGGTGATTACGA TATAGTTTTGATGGCCTACGTTATCCATGCCGTTTCTAACATTAAGTTCTCCATCGAA CAGTTGTACAAGTTGTTGTCTCCAAGAGGTTGGTTGTTGTGTATTGAACCTAAGTC CAACGTTGTGTTCTCCGATTTGGTTTTCGGTTGTTTTAATCAGTGGTGGAACTACTA CGATGATATTAGAACTACCCACTGCTCCTTGTCTGAATCTCAATGGAATCAGTTGTT GTTGAACCAGTCCTTGAACAACGAATCCTCTTCTTCTTCTAACTGTTACGGTGGTT TTTCCAACGTTTCTTTTATTGGTGGTGAAAAGGATGTCGACTCCCATTCTTTCATAT TGCACTGCCAAAAAGAATCCATCTCCCAAATGAAGTTAGCCACCACTATTAACAAC GGTTTGTCATCTGGTTCCATCGTTATCGTTTTGAACTCTCAACAATTGACCAACAT GAAGTCCTACCCAAAGGTTATTGAGTATATTCAAGAGGCTACCTCTTTGTGCAAGA CCATTGAAATTATCGATTCCAAGGACGTCTTGAACTCTACCAATTCAGTTTTGGAA AAGATCCAAAAGTCCTTGTTGGTGTTCTGTTTGTTGGGTTATGACTTGTTGGAGA ACAACTACCAAGAACAGTCTTTCGAATACGTTAAGTTGTTGAACTTGATCTCTACT ACCGCCTCTTCATCTAATGATAAGAAACCACCAAAGGTCTTGTTGATCACCAAGCA ATCTGAAAGAATCTCCAGGTCTTTCTACTCCAGATCCTTGATTGGTATTTCCAGAA CCTCTATGAACGAGTACCCAAATTTGTCCATTACCTCTATCGATTTGGATACCAACG ACTACTCATTGCAGTCTTTGTTGAAGCCAATCTTCAGCAACTCTAAGTTTTCCGAC AACGAGTTCATCTTCAAAAAGGGCTTGATGTTCGTGTCCAGGATCTTTAAGAACA AGCAGTTGCTAGAATCCTCCAACGCTTTTGAAACTGACTCTTCTAACTTGTACTG TAAGGCCTCTTCTGACTTGTCTTACAAGTACGCTATTAAGCAGTCTATGTTGACCG AAAATCAGATCGAAATCAAGGTTGAATGCGTCGGTATTAACTTCAAGGACAACCTA TTCTACAAGGGCTTGTTGCCACAAGAAATTTTCAGAATGGGTGACATCTACAATC CACCATATGGTTTGGAATGCTCTGGTGTTATTACCAGAATTGGTTCTAACGTCACC GAATACTCAGTTGGTCAAAATGTTTTTGGTTTCGCCAGACATTCTTTGGGTTCTCA

Table A2. *Cont.*

	DNA Sequence
pSteelyA-1 sequencing	TGTTGTTACCAACAAGGATTTGGTTATCTTGAAGCCAGATACCATCTCATTTTCTGA AGCTGCTTCTATCCCAGTTGTTTACTGTACTGCTTGGTACTCCTTGTTCAACATTG GTCAGTTGTCTAACGAAGAATCCATCCTAATTCATTCTGCTACTGGTGGTGTAGGT TTGGCTTCTTTGAATTTGTTGAAAATGAAGAATCAGCAACAGCAACCATTGACCAA TGTTTATGCTACTGTTGGCTCTAACGAGAAGAAGAAGTTCTTGATCGATAACTTCAA CAACTTGTTCAAAGAGGACGGCGAAAACATTTTCTCTACCAGAGACAAAGAATACT CCAACCAGTTGGAATCCAAGATCGATGTTATTTTGAACACCTTGTCCGGTGAATTCG TCGAATCTAATTTCAAGTCCTTGAGATCCTTCGGTAGATTGATTGATTTGTCTGCTAC TCACGTTTACGCCAATCAACAAATTGGTCTAGGTAACTTCAAGTTCGACCACTTGTA TTCTGCTGTTGACTTGGAAAGATTGATCGACGAAAAACCTAAGTTGTTGCAGTCCA TCTTGCAAAGAATTACCAACTCTATCGTCAACGGTTCCTTGGAAAAAATTCCAATTA CCATCTTCCCATCCACCGAAACTAAGGATGCTATCGAATTATTGTCCAAGAGATCCC ATATCGGTAAAGTTGTTGTAGATTGCACCGATATCTCTAAGTGTAATCCTGTTGGTG ATGTGATCACCAACTTCTCTATGAGATTGCCAAAGCCAAACTACCAGTTGAATTTG AACTCCACCTTGTTGATTACTGGTCAGTCTGGTTTGTCTATCCCTTTGTTGAATTG GTTGTTGTCTAAGTCTGGTGGTAACGTTAAGAACGTTGTCATCATTTCTAAGTCCA CCATGAAGTGGAAGTTGCAGACTATGATTTCCCATTTCGTTTCCGGTTTCGGTATC CATTTTAACTACGTTCAAGTCGACATCTCCAACTACGATGCTTTGTCTGAAGCTAT TAAGCAATTGCCATCTGATTTGCCACCAATCACCTCTGTTTTTCATTTGGCTGCTA TCTACAACGATGTTCCAATGGATCAAGTTACCATGTCTACCGTTGAATCTGTTCAT AACCCTAAAGTTTTGGGTGCCGTTAACTTGCATAGAATCTCTGTTTCTTTTGGTT GGAAGTTGAACCACTTCGTCTTGTTCTCTTCTATTACTGCTATTACCGGTTACCC AGACCAATCTATCTACAATTCTGCCAACTCTATTTTGGACGCTTTGTCCAACTTT AGAAGGTTTATGGGTTTGCCATCCTTCTCCATTAACTTGGGTCCAATGAAGGAT GAAGGTAAGGTTTCTACCAACAAGAGCATCAAGAAGCTATTCAAGTCTAGAGG TTTGCCAAGCCTATCCTTGAACAAGTTATTTGGTTTGTTGGAGGTCGTCATCAA CAACCCATCTAATCATGTTATCCCATCCCAATTGATTTGCTCCCCAATCGATTTC AAGACCTACATCGAATCTTTCTCAACTATGAGGCCAAAGTTGTTACACTTGCAAC CTACCATTTCCAAGCAGCAATCTTCTATCATTAACGATTCTACCAAGGCTTCCTCC AACATTTCATTGCAAGATAAGATCACCTCCAAGGTGTCTGATTTGTTGTCCATTC CAATCTCCAAGATCAACTTCGATCATCCATTGAAACACTACGGCTTGGATTCTTT GTTGACCGTTCAATTCAAATCCTGGATCGACAAAGAATTCGAAAAGAACTTGTT CACCCATATCCAATTGGCCACCATCTCTATTAACTCATTCTTGGAAAAGGTGAAC GGCTTGTCTACAAACAATAACAACAACAACAATTCCAACGTCAAGTCCTCTCCAT CCATTGTCAAAGAAGAAATCGTTACCTTGGACAAGGATCAACAACCATTGCTATT GAAAGAACACCAGCACATTATCATCTCCCCAGATATTAGAATCAACAAGCCAAAG AGGGAATCCTTGATTAGAACCCCAATCTTGAACAAATTCAACCAGATCACCGAAT CCATTATCACTCCATCTACACCATCTTTGTCCCAATCCGATGTTTTGAAAACTCCA CCAATCAAGTCTTTGAACAACACTAAGAACTCCAGCTTGATTAACACCCCACCAA TTCAATCTGTCCAACAACATCAAAAGCAACAACAAAAGGTCCAAGTCATCCAACA ACAGCAACAACCATTATCCAGATTGTCCTACAAGAGCAACAACAACTCTTTCGTT TTGGGTATCGGTATTTCTGTTCCAGGTGAACCTATTTCCCAACAATCCTTGAAAGA CTCCATCTCCAATGACTTTTCTGATAAGGCTGAAACTAACGAGAAGGTCAAGAGA ATCTTTGAGCAATCTCAAATCAAGACCAGACACTTGGTTAGAGATTACACTAAGCC AGAGAACTCCATCAAGTTCAGACATTTGGAAACCATTACCGATGTGAACAACCAG TTCAAGAAAGTTGTTCCAGATTTGGCTCAACAAGCCTGTTTGAGAGCTTTGAAAG ATTGGGGTGGTGATAAGGGTGATATTACCCATATAGTTTCTGTTACCTCCACCGGTA TTATCATCCCAGATGTTAATTTCAAGTTGATCGACTTGTTGGGCTTGAACAAGGAT GTTGAAAGAGTGTCTTTGAACCTAATGGGTTGTTTGGCTGGTTTGAGTTCTTTGA GAACTGCTGCTTCTTTGGCTAAGGCTTCTCCAAGAAATAGAATTTTGGTTGTCTGT ACCGAAGTCTGCTCCTTGCATTTTTCTAATACTGATGGTGGTGATCAAATGGTCGC CTCTTCTATTTTTGCTGATGGTTCTGCTGCTTACATTATTGGTTGTAACCCAAGAAT TGAAGAAACCCCATTATACGAAGTCATGTGCTCCATTAACAGATCTTTCCCAAATAC CGAAAACGCCATGGTTTGGGATTTGGAAAAAGAAGGTTGGAACTTGGGTTTGGAT GCTTCTATTCCAATTGTCATTGGTTCTGGTATTGAAGCCTTCGTTGATACTTTGTTG

Table A2. *Cont.*

	DNA Sequence
pSteelyA-1 sequencing	GATAAGGCTAAGTTGCAAACTTCCACTGCTATTTCTGCTAAGGATTGCGAATTCTT GATTCATACTGGTGGCAAGTCCATCTTGATGAACATCGAAAATTCCTTGGGTATCG ACCCAAAGCAAACTAAGAATACTTGGGATGTTTACCATGCCTACGGCAATATGTCAT CTGCCTCTGTTATTTTCGTTATGGATCATGCCAGAAAGTCCAAGTCTTTGCCAACTT ACTCAATTTCTTTGGCTTTTGGTCCAGGTTTGGCTTTTGAAGGTTGTTTCTTGAAGA ACGTCGTCGAACAGAAGCTCATTTCCGAAGAGGACTTGTAACCGCAACAACTACCT CGACTTTGGCTGGGACACTTTCAGTGAGGACAAGAAGCTTCAGAAGCGTGCTATC GAACTCAACCAGGGACGTGCGGCACAAATGGGCATCCTTGCTCTCATGGTGCACG AACAGTTGGGAGTCTCTATCCTTCCTTAAAAATTTAATTTTCATTAGTTGCAGTCAC TCCGCTTTGGTTTCGCTAGTGATAATAAGTGACTGAGGTATGTGCTCTTCTTATCTC CTTTTGTAGTGTTGCTCTTATTTTAAACAACTTTGCGGTTTTTTGATGACTTTGCGA TTTTGTTGTTGCTTTGCAGTAAATTGCAAGATTTAATAAAAAAACGCAAAGCAATGA TTAAAGGATGTTCAGAATGAAACTCATGGAAACACTTAACCAGTGCATAAACGCTG GTCATGAAATGACGAAGGCTATCGCCATTGCACAGTTTAATGATGACAGCCCGGAA GCGAGGAAAATAACCCGGCGCTGGAGAATAGGTGAAGCAGCGGATTTAGTTGGGG TTTCTTCTCAGGCTATCAGAGATGCCGAGAAAGCAGGGCGACTACCGCACCCGGAT ATGGAAATTCGAGGACGGGTTGAGCAACGTGTTGGTTATACAATTGAACAAATTAAT CATATGCGTGATGTGTTTGGTACGCGATTGCGACGTGCTGAAGACGTATTTCCACCG GTGATCGGGGTTGCTGCCCATAAAGGTGGCGTTTACAAAACCTCAGTTTCTGTTCA TCTTGCTCAGGATCTGGCTCTGAAGGGGCTACGTGTTTTGCTCGTGGAAGGTAACG ACCCCCAGGGAACAGCCTCAATGTATCACGGATGGGTACCAGATCTTCATATTCATG CAGAAGACACTCTCCTGCCTTTCTATCTTGGGGAAAAGGACGATGTCACTTATGCA ATAAAGCCCACTTGCTGGCCGGGGCTTGACATTATTCCTTCCTGTCTGGCTCTGCA CCGTATTGAAACTGAGTTAATGGGCAAATTTGATGAAGGTAAACTGCCCACCGATC CACACCTGATGCTCCGACTGGCCATTGAAACTGTTGCTCATGACTATGATGTCATA GTTATTGACAGCGCGCCTAACCTGGGTATCGGCACGATTAATGTCGTATGTGCTGC TGATGTGCTGATTGTTCCCACGCCTGCTGAGTTGTTTGACTACACCTCCGCACTG CAGTTTTTCGATATGCTTCGTGATCTGCTCAAGAACGTTGATCTTAAAGGGTTCGA GCCTGATGTACGTATTTTGCTTACCAAATACAGCAATAGCAATGGCTCTCAGTCCCC GTGGATGGAGGAGCAAATTCGGGATGCCTGGGGAAGCATGGTTCTAAAAAATGTT GTACGTGAAACGGATGAAGTTGGTAAAGGTCAGATCCGGATGAGAACTGTTTTTG AACAGGCCATTGATCAACGCTCTTCAACTGGTGCCTGGAGAAATGCTCTTTCTATT TGGGAACCTGTCTGCAATGAAATTTTCGATCGTCTGATTAAACCACGCTGGGAGAT TAGATAATGAAGCGTGCGCCTGTTATTCCAAAACATACGCTCAATACTCAACCGGTT GAAGATACTTCGTTATCGACACCAGCTGCCCCGATGGTGGATTCGTTAATTGCGCG CGTAGGAGTAATGGCTCGCGGTAATGCCATTACTTTGCCTGTATGTGGTCGGGATG TGAAGTTTACTCTTGAAGTGCTCCGGGGTGATAGTGTTGAGAAGACCTCTCGGGT ATGGTCAGGTAATGAACGTGACCAGGAGCTGCTTACTGAGGACGCACTGGATGAT CTCATCCCTTCTTTTCTACTGACTGGTCAACAGACACCGGCGTTCGGTCGAAGAG TATCTGGTGTCATAGAAATTGCCGATGGGAGTCGCCGTCGTAAAGCTGCTGCACTT ACCGAAAGTGATTATCGTGTTCTGGTTGGCGAGCTGGATGATGAGCAGATGGCTG CATTATCCAGATTGGGTAACGATTATCGCCCAACAAGTGCTTATGAACGTGGTCAG CGTTATGCAAGCCGATTGCAGAATGAATTTGCTGGAAATATTTCTGCGCTGGCTGA TGCGGAAAATATTTCACGTAAGATTATTACCCGCTGTATCAACACCGCCAAATTGCC TAAATCAGTTGTTGCTCTTTTTTCTCACCCCGGTGAACTATCTGCCCGGTCAGGTG ATGCACTTCAAAAAGCCTTTACAGATAAAGAGGAATTACTTAAGCAGCAGGCATCT AACCTTCATGAGCAGAAAAAAGCTGGGGTGATATTTGAAGCTGAAGAAGTTATCA CTCTTTTAACTTCTGTGCTTAAAACGTCATCTGCATCAAGAACTAGTTTAAGCTCA CGACATCAGTTTGCTCCTGGAGCGACAGTATTGTATAAGGGCGATAAAATGGTGCT TAACCTGGACAGGTCTCGTGTTCCAACTGAGTGTATAGAGAAAATTGAGGCCATT CTTAAGGAACTTGAAAAGCCAGCACCCTGATGCGACCTCGTTTTAGTCTACGTTTA TCTGTCTTTACTTAATGTCCTTTGTTACAGGCCAGAAAGCATAACTGGCCTGAATA TTCTCTCTGGGCCCACTGTTCCACTTGTATCGTCGGTCTGATAATCAGACTGGGAC CACGGTCCCACTCGTATCGTCGGTCTGATTATTAGTCTGGGACCACGGTCCCACTC GTATCGTCGGTCTGATTATTAGTCTGGGACCACGGTCCCACTCGTATCGTCGGTCT

Table A2. *Cont.*

	DNA Sequence
pSteelyA-1 sequencing	GATAATCAGACTGGGACCACGGTCCCACTCGTATCGTCGGTCTGATTATTAGTCTG GGACCATGGTCCCACTCGTATCGTCGGTCTGATTATTAGTCTGGGACCACGGTCCC ACTCGTATCGTCGGTCTGATTATTAGTCTGGAACCACGGTCCCACTCGTATCGTCG GTCTGATTATTAGTCTGGGACCACGGTCCCACTCGTATCGTCGGTCTGATTATTAG TCTGGGACCACGATCCCACTCGTGTTGTCGGTCTGATTATCGGTCTGGGACCACG GTCCCACTTGTATTGTCGATCAGACTATCAGCGTGAGACTACGATTCCATCAATGC CTGTCAAGGGCAAGTATTGACATGTCGTCGTAACCTGTAGAACGGAGTAACCTCG GTGTGCGGTTGTATGCCTGCTGTGGATTGCTGCTGTGTCCTGCTTATCCACAACAT TTTGCGCACGGTTATGTGGACAAAATACCTGGTTACCCAGGCCGTGCCGGCACGT TAACCGGGCTGCATCCGATGCAAGTGTGTCGCTGTCGACGAGCTCGCGAGCTCGG ACATGAGGTTGCCCCGTATTCAGTGTCGCTGATTTGTATTGTCTGAAGTTGTTTTTA CGTTAAGTTGATGCAGATCAATTAATACGATACCTGCGTCATAATTGATTATTTGACG TGGTTTGATGGCCTCCACGCACGTTGTGATATGTAGATGATAATCATTATCACTTTAC GGGTCCTTTCCGGTGATCCGACAGGTTACGGGGCGGCGACCTCGCGGGTTTTCGC TATTTATGAAAATTTTCCGGTTTAAGGCGTTTCCGTTCTTCTTCGTCATAACTTAATG TTTTTATTTAAAATACCCTCTGAAAAGAAAGGAAACGACAGGTGCTGAAAGCGAGC TTTTTGGCCTCTGTCGTTTCCTTTCTCTGTTTTTGTCCGTGGAATGAACAATGGAA GTCCGAGCTCATCGCTAATAACTTCGTATAGCATACATTATACGAAGTTATA
pSteelyA-2 sequencing	TTCGATGCGGCCGCAAGGGGTTCGCGTCAGCGGGTGTTGGCGGGTGTCGGGGCT GGCTTAACTATGCGGCATCAGAGCAGATTGTACTGAGAGTGCACCATATGCGGTGT GAAATACCACACAGATGCGTAAGGAGAAAATACCGCATCAGGCGCCATTCGCCATT CAGCTGCGCAACTGTTGGGAAGGGCGATCGGTGCGGGCCTCTTCGCTATTACGCC AGCTGGCGAAAGGGGGATGTGCTGCAAGGCGATTAAGTTGGGTAACGCCAGGGTT TTCCCAGTCACGACGTTGTAAAACGACGGCCAGTGAATTGTAATACGACTCACTATA GGGCGAATTCGAGCTCGGTACCCGGGGATCCTCTAGAGTCGACCTGCAGGCATGCA AGCTTGAGTATTCTATAGTCTCACCTAAATAGCTTGGCGTAATCATGGTCATAGCTGT TTCCTGTGTGAAATTGTTATCCGCTCACAATTCCACACAACATACGAGCCGGAAGCA TAAAGTGTAAAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGC GCTCACTGCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAATGAATC GGCCAACGCGAACCCCTTGCGGCCGCCCGGGCCGTCGACCAATTCTCATGTTTGA CAGCTTATCATCGAATTTCTGCCATTCATCCGCTTATTATCACTTATTCAGGCGTAGC AACCAGGCGTTTAAGGGCACCAATAACTGCCTTAAAAAAATTACGCCCCGCCCTGC CACTCATCGCAGTACTGTTGTAATTCATTAAGCATTCTGCCGACATGGAAGCCATCA CAAACGGCATGATGAACCTGAATCGCCAGCGGCATCAGCACCTTGTCGCCTTGCG TATAATATTTGCCCATGGTGAAAACGGGGGCGAAGAAGTTGTCCATATTGGCCACG TTTAAATCAAAACTGGTGAAACTCACCCAGGGATTGGCTGAGACGAAAAACATATT CTCAATAAACCCTTTAGGGAAATAGGCCAGGTTTTCACCGTAACACGCCACATCTT GCGAATATATGTGTAGAAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGAT GAAAACGTTTCAGTTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTATCCC ATATCACCAGCTCACCGTCTTTCATTGCCATACGAAATTCCGGATGAGCATTCATC AGGCGGGCAAGAATGTGAATAAAGGCCGGATAAAACTTGTGCTTATTTTTCTTTAC GGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGGTCTGGTTATAGGTACATTGAG CAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATTGGGATATATCAACG GTGGTATATCCAGTGATTTTTTTCTCCATTTTAGCTTCCTTAGCTCCTGAAAATCTC GATAACTCAAAAAATACGCCCGGTAGTGATCTTATTTCATTATGGTGAAAGTTGGA ACCTCTTACGTGCCGATCAACGTCTCATTTTCGCCAAAAGTTGGCCCAGGGCTTC CCGGTATCAACAGGGACACCAGGATTTATTTATTCTGCGAAGTGATCTTCCGTCAC AGGTATTTATTCGCGATAAGCTCATGGAGCGGCGTAACCGTCGCACAGGAAGGAC AGAGAAAGCGCGGATCTGGGAAGTGACGGACAGAACGGTCAGGACCTGGATTGG GGAGGCGGTTGCCGCCGCTGCTGCTGACGGTGTGACGTTCTCTGTTCCGGTCAC ACCACATACGTTCCGCCATTCCTATGCGATGCACATGCTGTATGCCGGTATACCGCT GAAAGTTCTGCAAAGCCTGATGGGACATAAGTCCATCAGTTCAACGGAAGTCTAC ACGAAGGTTTTTGCGCTGGATGTGGCTGCCCGGCACCGGGTGCAGTTTGCGATG CCGGAGTCTGATGCGGTTGCGATGCTGAAACAATTATCCTGAGAATAAATGCCTT GGCCTTTATATGGAAATGTGGAACTGAGTGGATATGCTGTTTTTGTCTGTTAAACA

Table A2. *Cont.*

	DNA Sequence
pSteelyA-2 sequencing	GAGAAGCTGGCTGTTATCCACTGAGAAGCGAACGAAACAGTCGGGAAAATCTCC CATTATCGTAGAGATCCGCATTATTAATCTCAGGAGCCTGTGTAGCGTTTATAGGAA GTAGTGTTCTGTCATGATGCCTGCAAGCGGTAACGAAAACGATTTGAATATGCCTT CAGGAACAATAGAAATCTTCGTGCGGTGTTACGTTGAAGTGGAGCGGATTATGTC AGCAATGGACAGAACAACCTAATGAACACAGAACCATGATGTGGTCTGTCCTTTT ACAGCCAGTAGTGCTCGCCGCAGTCGAGCGACAGGGCGAAGCCCATCGATACTA GCTTGATTGGGATATCTCGCTCGTGCTTGTCGCGTGCTATGTCTTTTTAGGGTACT TTGAACCTACGTTCGTACTTGTGTAATATGATCATCGTCGTCATCGTATTATCGTTTT TCATCCGTCCAGCGCAAAATGCATTAGCAGCTAGTCCTAGCGTGCGGAGCTACCT GTACAGGTGCATGACGGATGCGTGTCCTTAAGTGAGTTTCTAATTAACAGTAACT TCTTTACTTATGTTTCAGTTTGTAAGAAGCGGGATGCGCTCGTCGCTTGACATCT GATTGGACTGCGTCGGCACGTGAAAACTACATTGTGAAATCTGCTAAAACTCCG GGTATCTCTGACACAAAACGATTCGGCTTCGCAATTTCAACATTACGGTCAAGGC TAACGTATCTTTCTCGGTCAACTTCAGATTATGCCGATTAAATTGTCGTAGCTTTC AAGGCGTTTTGAGTACTGCGGCAGTTGTTGAACCTGCAAGGAGAAGATCTCGA CAACAGAATAAAGCGAAAAATGGGTCTCATGCACTAACACTCAGGCCTCCCTCA TAATCTCTGTTTGAGTTTACCAACAACACATATATACATTTCGACAAAATGGCCAA GTTGACCAGTGCCGTTCCGGTGCTCACCGCGCGCGACGTCGCCGGAGCGGTC GAGTTCTGGACCGACCGGCTCGGGTTCTCCCGGGACTTCGTGGAGGACGACT TCGCCGGTGTGGTCCGGGACGACGTGACCCTGTTCATCAGCGCGGTCCAGGA CCAGGTGGTGCCAGACAACACCCTGGCCTGGGTGTGGGTGCGCGGCCTGGAC GAGCTGTACGCCGAGTGGTCGGAGGTCGTGTCCACGAACTTCCGGGACGCCT CCGGGCCGGCCATGACCGAGATCGGCGAGCAGCCGTGGGGGCGGGAGTTCG CCCTGCGCGACCCGGCCGGCAACTGCGTGCACTTCGTGGCCGAGGAGCAGG ACTGACCGACGCCGACCAACACCGCCGGTCCGACGCGGCCCGACGGGTCCG AGGCCTCGGAGATCTGGGCCCATGCGGCCGCAACAACTACCTCGACTTTGGC TGGGACACTTTCAGTGAGGACAAGAAGCTTCAGAAGCGTGCTATCGAACTCA ACCAGGGACGTGCGGCACAAATGGGCATCCTTGCTCTCATGGTGCACGAACA GTTGGGAGTCTCTATCCTTCCTTAAAAATTTAATTTTCATTAGTTGCAGTCACTC CGCTTTGGTTTCGTAACTATAACGGTCCTAAGGTAGCGAACGTTGCAGGCCAT GCTGTCCAGGCAGGTAGATGACGACCATCAGGGACAGCTTCAAGGATCGCTC GCGGCTCTTACCAGCCTAACTTCGATCATTGGACCGCTGATCGTCACGGCGAT TTATGCCGCCTCGGCGAGCACATGGAACGGGTTGGCATGGATTGTAGGCGCC GCCCTATACCTTGTCTGCCTCCCCGCGTTGCGTCGCGGTGCATGGAGCCGGG CCACCTCGACCTGAATGGAAGCCGGCGGCACCTCGCTAACGGATTCACCACT CCAAGAATTGGAGCCAATCAATTCTTGCGGAGAACTGTGAATGCGCAAACCAA CCCTTGGCAGAACATATCCATCGCGTCCGCCATCTCCAGCAGCCGCACGCGGC GCATCGGGGGGGGGGGGTTTCAATTCATCATTTTTTTTTATTCTTTTTTTTGA TTTCGGTTTCCTTGAAATTTTTTTGATTCGGTAATCTCCGAACAGAAGGAAGAAC GAAGGAAGGAGCACAGACTTAGATTGGTATATATACGCATATGTAGTGTTGAAGAA ACATGAAATTGCCCAGTATTCTTAACCCAACTGCACAGAACAAAAACCTGCAGGA AACGAAGATAAATCATGTCGAAAGCTACATATAAGGAACGTGCTGCTACTCATCCT AGTCCTGTTGCTGCCAAGCTATTTAATATCATGCACGAAAAGCAAACAAACTTGT GTGCTTCATTGGATGTTCGTACCACCAAGGAATTACTGGAGTTAGTTGAAGCATT AGGTCCCAAAATTTGTTTACTAAAAACACATGTGGATATCTTGACTGATTTTTCCA TGGAGGGCACAGTTAAGCCGCTAAAGGCATTATCCGCCAAGTACAATTTTTTACT CTTCGAAGACAGAAAATTTGCTGACATTGGTAATACAGTCAAATTGCAGTACTCT GCGGGTGTATACAGAATAGCAGAATGGGCAGACATTACGAATGCACACGGTGTG GTGGGCCCAGGTATTGTTAGCGGTTTGAAGCAGGCGGCGGAAGAAGTAACAAA GGAACCTAGAGGCCTTTTGATGTTAGCAGAATTGTCATGCAAGGGCTCCCTAGC TACTGGAGAATATACTAAGGGTACTGTTGACATTGCGAAGAGCGACAAAGATTTT GTTATCGGCTTTATTGCTCAAAGAGACATGGGTGGAAGAGATGAAGGTTACGATT GGTTGATTATGACACCCGGTGTGGGTTTAGATGACAAGGGAGACGCATTGGGTC AACAGTATAGAACCGTGGATGATGTGGTCTCTACAGGATCTGACATTATTATTGTT GGAAGAGGACTATTTGCAAAGGGAAGGGATGCTAAGGTAGAGGGTGAACGTTAC

Table A2. *Cont.*

	DNA Sequence
pSteelyA-2 sequencing	AGAAAAGCAGGCTGGGAAGCATATTTGAGAAGATGCGGCCAGCAAAACTAAAAA ACTGTATTATAAGTAAATGCATGTATACTAAACTCACAAATTAGAGCTTCAATTTAA TTATATCAGTTATTACCCGGCCGGGAATCTCGGTCGTAATGATTTTTATAATGACG AAAAAAAAAAAAATTGGAAAGAAAACCCCCCCCCCCCCCGCGTTGGGTCCTGGC CACGGGTGCGCATGATCGTGCTCCTGTCGTTGAGGACCCGGCTAGGCTGGCGG GGTTGCCTTACTGGTTAGCAGAATGAATCACCGATACGCGAGCGAACGTGAAGC GACTGCTGCTGCAAAACGTCTGCGACCTGAGCAACAACATGAATGGTCTTCGG TTTCCGTGTTTCGTAAAGTCTGGAAACGCGGAAGTCAGCGCCCTGCACCATTAT GTTCCGGATCTGCATCGCAGGATGCTGCTGGCTACCCTGTGGAACACCTACATC TGTATTAACGAAGCGCTGGCATTGACCCTGAGTGATTTTTCTCTGGTCCCGCCG CATCCATACCGCCAGTTGTTTACCCTCACAACGTTCCAGTAACCGGGCATGTTCA TCATCAGTAACCCGTATCGTGAGCATCCTCTCTCGTTTCATCGAGTTACGCTAGG GATAACAGGGTAATATAGATCTTCCGCTGCATAACCCTGCTTCGGGGTCATTATA GCGATTTTTTCGGTATATCCATCCTTTTTCGCACGATATACAGGATTTTGCCAAAG GGTTCGTGTAGACTTTCCTTGGTGTATCCAACGGCGTCAGCCGGGCAGGATAGG TGAAGTAGGCCCACCCGCGAGCGGGTGTTCCTTCTTCACTGTCCCTTATTCGCA CCTGGCGGTGCTCAACGGGAATCCTGCTCTGCGAGGCTGGCCGGCTACCGCCG GCGTAACAGATGAGGGCAAGCGGATGGCTGATGAAACCAAGCCAACCAGGAAG GGCAGCCCACCTATCAAGGTGTACTGCCTTCCAGACGAACGAAGAGCGATTGAG GAAAAGGCGGCGGCGGCCGGCATGAGCCTGTCGGCCTACCTGCTGGCCGTCGG CCAGGGCTACAAAATCACGGGCGTCGTGGACTATGAGCACGTCCGCGAGCTGGC CCGCATCAATGGCGACCTGGGCCGCCTGGGCGGCCTGCTGAAACTCTGGCTCAC CGACGACCCGCGCACGGCGCGGTTCGGTGATGCCACGATCCTCGCCCTGCTGGC GAAGATCGAAGAGAAGCAGGACGAGCTTGGCAAGGTCATGATGGGCGTGGTCCG CCCGAGGGCAGAGCCATGACTTTTTTAGCCGCTAAAACGGCCGGGGGGTGCGCG TGATTGCCAAGCACGTCCCCATGCGCTCCATCAAGAAGAGGCACTTCGAGCTGTA AGTACATCACCGACGAGCAAGGCAAGACGATCCGCGCCTGTTTTATTGAGAACGT TGTTCGTGTTGGCCTCAATGGTAGCGATGCGTCATTCAGCGAAGTTCTGGTGCTG ATGATGTGGTTCGCTTTGCCACTGGTCAATGTGGTAAGCCCGTGTAATGTCAGTA ACCTTTTTACTGATCTCAGCTTGAGCACGGTCGCTGATGAGCTTATCCATGGCCC CACGGTAACGGATATGATCCTCTAGGGCGTTGACAAATTCTTTGTCGGTTTTCAT GGGGTAGACGTCAGTGACCAGGGAACGTCTCCCTACAAAAAGTTGCGCATACTT TGCTCCGTTGTCGACGGCAGGGGTGTCGGACCAGATTGTATCTGTGGCAACGGC CTCATTGCGTCAATGGACCTTTAAAGCCGGGAAACGAGACTTGAAATGTTTACGT AGAGGTGCATTATAGACCTCACGCGCATATTGAGTGGTTGCAAAAATGGTTTTGC GAACGGTATCACTGGAGACCCATGCCAGGCAAGGACGGAGGGCATCATAATCAT GTTCATTGCGTTGGACAGCATGCTTGTTACACGTAAGTATACGGTCGAGAGCATC GTGACGTTGAGAATTACAGATGGCAACGTGTCGGTGCATGTATTGGCCGAGATT GTCAAATCGTGGCTCAATATATGGCATGCCAGGTAAGTCATGGATGTCGGTATGC CATTCAGCCTTCATGTCGATTTCGTTGTCGAGAACTGATGGGTCCCAGTCAACG TCAGAAGTAAGAACAACATGGGGAAGGGAATGAAGTTCATGACTGGTGGGTGC GCGCATATCCATGTACGGAAGACCCTGTCGTATGTTTAGTGGGATGATGTAATCA TCCAGGGTAACAATACGTTGGTTGCCGCCCACGGTACGAGACCGATCTTGAACA CAATTGTGGCAATGTTCAAGTTGGGCGCTGGAATGGATGGTTTTACCTTTACCAA GATGCGCGTATTGATGCATGATAACAACAATGGGCCCTCGTTGCGATTCGACAAG ACCGGCAGCCGTGACAATGTCTAGATTGGACAAGGTATGTTCATTTATACCGGTT ATGTTGGCTGAACGTCCAGTTTTGTGCAGTACGGTAACATCACTCCCCGCAAGT CCACCGTTGGCACCGCGATCGACAAGTGCAGATGTGGTATTTTGTACTGTGTGT CGGGAGACTTGGTACTGTAACACATTTGACTGAAGTGACTTGGTGGTACCATGA GGACGGAGGGAACCCGTTGATACGGTGTTGCGTGACGCTGCAAGTACCTTACG TATGTCGCCTGGATCCATACGTCCAACCCGATCAGAAAGATGTGCTAGGAGTTC CGTTTCTGGTGCACAATCATGAAAGGTATCCACGGGAGTTCCATTGTTGTCGTC CGGGGCTGCGTCGCGACTGCCAGTTGCATGTACATGCGCCATCAAGGGACGTG CCAATCCATTACTAACCGGGAGAACCTTAGCTGGGGCAGCCAATCCCTGAAGTA TAGCCTTAGCATCATCTGAGAGCTGGTTCCACATATCTCTAGGGATATAAGGTCG

Table A2. *Cont.*

	DNA Sequence
pSteelyA-2 sequencing	TTCACGGTTAGTGGGCGTACTATGATGTCGGTTATTAGTACAATTCTCCCTGCGG GCATGCGCATTGGCTTCATAGAGTACGGAAGGTGACAAGTCAATATTGTAGTTAA CATCCGGATCAGTGTCAAAGTCTGTAGGATGGTAAGAAAGATCAGTAGAATGAAT ACTACGCTTTTCCTTGGGACTACGGGAATTAGAGAAGTTGTTTCCTTTATTGTAGA GTGACGCTGAAGCAAGTAGAAGACTAAGGTAACTCTCGTAGCTAATAGGATTACCT CCTTTGGCTAGGTCAAGAGTGGCTGTGATCTTCACTTGACAAAGTTCCGGTACAT TGTGGACAGCATTCTCCAAAAGACTAAGACACAGTTGCTTTGGGAGTTGCTCAG CCATTGGTACAGTATTGTGGTAGATACAAAGGTGGTTCTTCCAATGAAGGATAAAT CCTTCTGCTGTGCCTGTCCATTACTAACCGGGAGAACCTTAGCTGGGGCAGCCA ATCCCTGAAGTATAGCCTTAGCATCATCTGAGAGCTGGTTCCACATATCTCTAGGG ATATAAGGTCGTTCACGGTTAGTGGGCGTACTATGATGTCGGTTATTAGTACAATTC TCCCTGCGGGCATGCGCATTGGCTTCATAGAGTACGGAAGGTGACAAGTCAATAT TGTAGTTAACATCCGGATCAGTGTCAAAGTCTGTAGGATGGTAAGAAAGATCAGTA GAATGAATACTACGCTTTTCCTTGGGACTACGGGAATTAGAGAAGTTGTTTCCTTT ATTGTAGAGTGACGCTGAAGCAAGTAGAAGACTAAGGTAACTCTCGTAGCTAATAG GATTACCTCCTTTGGCTAGGTCAAGAGTGGCTGTGATCTTCACTTGACAAAGTTCC GGTACATTGTGGACAGCATTCTCCAAAAGACTAAGACACAGTTGCTTTGGGAGTTG CTCAGCCATTGGTACAGTATTGTGGTAGATACAAAGGTGGTTCTTCCAATGAAGGAT AAATCCTTCTGCTGTGCCTGTCCATGAGGATCCATATTTCGCCGTAGTTAGGTAACC AAGCGTGGTGGCTGAACTGATCTTCGCACTTGCTGATTCCGTATAGTGTTTGACAA CTTTACAAAACACTTCTTGCGCAGTTCGCTCTAGCCTGGACAGAGAAGGGACAAT CTTCGTCGTTAAGACTCGTGCGAATAGCAAAAGATCACAAAATAGCACATCGGCAC CGACCAACGATTATTTCCAAGGAAAAAAAGAATGCTTCACTACAAGAAATTGTGT CATCCCTATACAGAGTCTTGTTACTGTGACAGAAAATTGATGGAAGATGTGGCGG ATTGCCTTTACACTAGCCAACTTGTTCGACTAATTGCAGCTTCTTCTGAGAGGCT TCACCGAGTAACGCGAAGAACACCGGTGTCTCGTACATGCTCGTCGGTGAACG CTCGTCCAATGACACCCCCCACTTTGTATCAATATCCCAACTTGGTAGTGAACTG GAATGATACATGCAATTTCGCGCCGCATCAACAGCCACGGGCACCATCGACGAA TAGACTCGGTCGAGCTGGTTGCCCTCGCCGCTGGGCTGGCGGCCGTCTATGGC CCTGCAAACGCGCCAGAAACGCCGTCGAAGCCGTGTGCGAGACACCGCGGCC GGCCGCCGGCGTTGTGGATACCTCGCGGAAAACTTGGCCCTCACTGACAGATG AGGGGCGGACGTTGACACTTGAGGGGCCGACTCACCCGGCGCGGCGTTGACA GATGAGGGGCAGGCTCGATTTCGGCCGGCGACGTGGAGCTGGCCAGCCTCGC AAATCGGCGAAAACGCCTGATTTTACGCGAGTTTCCCACAGATGATGTGGACAA GCCTGGGGATAAGTGCCCTGCGGTATTGACACTTGAGGGGCGCGACTACTGAC AGATGAGGGGCGCGATCCTTGACACTTGAGGGGCAGAGTGCTGACAGATGAGG GGCGCACCTATTGACATTTGAGGGGCTGTCCACAGGCAGAAAATCCAGCATTTG CAAGGGTTTCCGCCCGTTTTTCGGCCACCGCTAACCTGTCTTTTAACCTGCTTTT AAACCAATATTTATAAACCTTGTTTTTAACCAGGGCTGCGCCCTGTGCGCGTGAC CGCGCACGCCGAAGGGGGGTGCCCCCCCTTCTCGAACCCTCCCGGTCGAGTGA GCGAGGAAGCACCAGGGAACAGCACTTATATATTCTGCTTACACACGATGCCTG AAAAAACTTCCCTTGGGGTTATCCACTTATCCACGGGGATATTTTTATAATTATTT TTTTTATAGTTTTTAGATCTTCTTTTTTAGAGCGCCTTGTAGGCCTTTATCCATGC TGGTTCTAGAGAAGGTGTTGTGACAAATTGCCCTTTCAGTGTGACAAATCACCC TCAAATGACAGTCCTGTCTGTGACAAATTGCCCTTAACCCTGTGACAAATTGCC CTCAGAAGAAGCTGTTTTTTCACAAAGTTATCCCTGCTTATTGACTCTTTTTTATT TAGTGTGACAATCTAAAAACTTGTCACACTTCACATGGATCTGTCATGGCGGAAA CAGCGGTTATCAATCACAAGAAACGTAAAAATAGCCCGCGAATCGTCCAGTCAAA CGACCTCACTGAGGCGGCATATAGTCTCTCCCGGGATCAAAAACGTATGCTGTAT CTGTTCGTTGACCAGATCAGAAAATCTGATGGCACCCTACAGGAACATGACGGTA TCTGCGAGATCCATGTTGCTAAATATGCTGAAATATTCGGATTGACCTCTGCGGAA GCCAGTAAGGATATACGGCAGGCATTGAAGAGTTTCGCGGGGAAGGAAGTGGTTT TTTATCGCCCTGAAGAGGATGCCGGCGATGAAAAAGGCTATGAATCTTTTCCTTGG TTTATCAAACGTGCGCACAGTCCATCCAGAGGGCTTTACAGTGTACATATCAACCC ATATCTCATTCCCTTCTTTATCGGGTTACAGAACCGGTTTACGCAGTTTCGGCTTA

Table A2. *Cont.*

	DNA Sequence
pSteelyA-2 sequencing	GTGAAACAAAAGAAATCACCAATCCGTATGCCATGCGTTTATACGAATCCCTGTG TCAGTATCGTAAGCCGGATGGCTCAGGCATCGTCTCTCTGAAAATCGACTGGAT CATAGAGCGTTACCAGCTGCCTCAAAGTTACCAGCGTATGCCTGACTTCCGCCGC CGCTTCCTGCAGGTCTGTGTTAATGAGATCAACAGCAGAACTCCAATGCGCCTCT CATACATTGAGAAAAAGAAAGGCCGCCAGACGACTCATATCGTATTTTCCTTCCGC GATATCACTTCCATGACGACAGGATAGTCTGAGGGTTATCTGTCACAGATTTGAGG GTGGTTCGTCACATTTGTTCTGACCTACTGAGGGTAATTTGTCACAGTTTTGCTGT TTCCTTCAGCCTGCATGGATTTTCTCATACTTTTTGAACTGTAATTTTTAAGGAAGC CAAATTTGAGGGCAGTTTGTCACAGTTGATTTCCTTCTCTTTCCCTTCGTCATGTG ACCTGATATCGGGGGTTAGTTCGTCATCATTGATGAGGGTTGATTATCACAGTTTAT TACTCTGAATTGGCTATCCGCGTGTGTACCTCTACCTGGAGTTTTTCCCACGGTGG ATATTTCTTCTTGCGCTGAGCGTAAGAGCTATCTGACAGAACAGTTCTTCTTTGCT TCCTCGCCAGTTCGCTCGCTATGCTCGGTTACACGGCTGCGGCGAGCATCACGTG CTATAAAAATAATTATAATTTAAATTTTTTAATATAAATATATAAATTAAAAATAGAAAG TAAAAAAAGAAATTAAAGAAAAAAATAGTTTTTGTTTTCCGAAGATGTAAAAGACTC TAGGGGGATCGCCAACAAATACTACCTTTTACCTTGCTCTTCCTGCTCTCAGGTAT TAATGCCGAATTGTTTCATCTTGTCTGTGTAGAAGACCACACACGAAAATCCTGT GATTTTACATTTTACTTATCGTTAATCGAATGTATATCTATTTAATCTGCTTTTCTTG TCTAATAAATATATATGTAAAGTACGCTTTTTGTTGAAATTTTTTAAACCTTTGTTT ATTTTTTTTTCTTCATTCCGTAACTCTTCTACCTTCTTTATTTACTTTCTAAAATCC AAATACAAAACATAAAAATAAATAAACACAGAGTAAATTCCCAAATTATTCCATCA TTAAAAGATACGAGGCGCGTGTAAGTTACAGGCAAGCGATCCTAGTACACTCTAT ATTTTTTTATGCCTCGGTAATGATTTTCATTTTTTTTTTCCACCTAGCGGATGACT CTTTTTTTTTCTTAGCGATTGGCATTATCACATAATGAATTATACATTATATAAAGT AATGTGATTTCTTCGAAGAATATACTAAAAAATGAGCAGGCAAGATAAACGAAG GCAAAGATGACAGAGCAGAAAGCCCTAGTAAAGCGTATTACAAATGAAACCAA GATTCAGATTGCGATCTCTTTAAAGGGTGGTCCCCTAGCGATAGAGCACTCGAT CTTCCCAGAAAAAGAGGCAGAAGCAGTAGCAGAACAGGCCACACAATCGCAAG TGATTAACGTCCACACAGGTATAGGGTTTCTGGACCATATGATACATGCTCTGGC CAAGCATTCCGGCTGGTCGCTAATCGTTGAGTGCATTGGTGACTTACACATAGA CGACCATCACACCACTGAAGACTGCGGGATTGCTCTCGGTCAAGCTTTTAAAGA GGCCCTAGGGGCCGTGCGTGGAGTAAAAAGGTTTGGATCAGGATTTGCGCCTTT GGATGAGGCACTTTCCAGAGCGGTGGTAGATCTTTCGAACAGGCCGTACGCAGT TGTCGAACTTGGTTTGCAAAGGGAGAAAGTAGGAGATCTCTCTTGCGAGATGAT CCCGCATTTTCTTGAAAGCTTTGCAGAGGCTAGCAGAATTACCCTCCACGTTGA TTGTCTGCGAGGCAAGAATGATCATCACCGTAGTGAGAGTGCGTTCAAGGCTC TTGCGGTTGCCATAAGAGAAGCCACCTCGCCCAATGGTACCAACGATGTTCCCT CCACCAAAGGTGTTCTTATGTAGTTTTACACAGGAGTCTGGACTTGACATACAG TGAATGTAACTTTCGAATTGACAGTATTAGTAGTCGTATTGACAGTGAGGCACGC CCCTCAATGTGCGAGGTGGAAAATATACCAGCATGACAATGAATCTTGGAGATT CTTTTGCTGTCATCAAGATTCACCGCCAAATCTTCAGGAACCTATCACGTCCAC AGGCGATGTTAATTCTTGAGTCGTCAAAACAAAGTCCTGTCCTACCTGTAGAAG TTGACAGCGAGCAATTGTATGCAAACTTCTGACTTTGTTATAATAACATTAAAGG TAATTAAGTATCTTCAATTAGGCATTTTGTCACTGTCAGTCCGTTCCGACAAATA TAGGTAGATTTGGAATGAATCTTTTCTATGCTGCTGCGAATCTTGTACACCTTT GAGGCCGTAGATTCTGTCCGACGAAGCGATAATTATTGCAAAATACATGGACTC ATTATTTTGATTCGATTTCTTTTTGGTATCCGACTCGAAAAGATCCATCACGGCG AGCGCCACCATGAACAAGAACTCCAAAATCCAGTCCCCAAACTCTTCTGATGTT GCTGTTATTGGTGTTGGTTTTAGATTCCCAGGTAACTCTAATGACCCAGAATCTT TGTGGAACAACTTGTTGGATGGTTTCGATGCTATTACCCAAGTCCCAAAAGAAA GATGGGCTACTTCTTTTAGAGAGATGGGTTTGATCAAGAACAAGTTCGGTGGTT TCTTGAAGGATTCTGAATGGAAGAATTTCGACCCTTTGTTCTTTGGTATCGGTC CAAAAGAAGCTCCATTCATTGATCCACAACAAAGGTTGTTGTTGTCCATCGTTT GGGAATCTTTGGAAGATGCTTACATCAGACCAGATGAATTGAGAGGTTCTAACA CTGGTGTTTTCATCGGTGTTTCTAACAACGATTACACCAAGTTGGGTTTCCAAG

Table A2. *Cont.*

	DNA Sequence
pSteelyA-2 sequencing	ACAACTACTCTATTTCTCCATACACTATGACCGGCTCTAACTCTTCATTGAACTC CAACAGAATTTCCTACTGCTTCGATTTTAGAGGTCCATCCATTACTGTTGATACC GCTTGTTCTTCTTCCTTGGTTTCTGTTAATTTGGGTGTCCAATCCATCCAAATGG GTGAATGTAAGATTGCTATTTGCGGTGGTGTTAACGCTTTGTTTGATCCATCTAC ATCTGTTGCCTTTTCCAAGTTGGGTGTTTTGTCTGAAAATGGCAGATGCAACTC TTTTAGTGATCAAGCCTCTGGTTACGTTAGATCTGAAGGTGCTGGTGTTGTTGT TTTGAAGTCTTTGGAACAAGCTAAGTTGGATGGTGATAGAATCTACGGTGTTATC AAGGGTGTTTCCTCTAATGAAGATGGTGCTTCTAATGGTGACAAGAACTCTTTGA CTACTCCATCTTGTGAAGCCCAATCCATTAACATTTCTAAGGCTATGGAAAAGGC CTCCTTGTCTCCATCTGATATCTATTACATTGAAGCCCATGGTACTGGTACTCCA GTTGGTGATCCAATTGAAGTTAAGGCCTTGTCCAAGATCTTCTCCAACTCTAAC AACAACCAGTTGAACAACTTCTCTACCGATGGTAATGATAACGATGATGATGAT GACGATAACACCTCTCCAGAACCATTATTGATTGGCTCATTCAAGTCCAACATC GGTCATTTGGAATCTGCTGCTGGTATTGCTTCTTTGATTAAGTGTTGCTTGATG TTGAAGAACAGGATGTTGGTTCCATCCATTAACTGCTCTAATTTGAACCCATCC ATTCCATTCGATCAGTACAACATCTCCGTTATCAGAGAAATCAGACAATTCCCA ACCGATAAGTTGGTTAACATCGGTATCAATTCTTTCGGTTTCGGTGGTTCTAAC TGCCATTTGATTATTCAAGAGTACAACAACAACTTCAAGAACAACTCTACCATC TGCAATAACAACAACAACAACAATAACAACATCGACTACTTGATCCCAATCTCC TCTAAGACTAAGAAGTCCTTGGATAAGTACTTGATTTTGATCAAGACCAACTCC AACTACCACAAGGATATTTCTTTCGATGACTTCGTCAAGTTCCAAATCAAGTCT AAGCAGTACAACTTGTCCAACAGAATGACTACCATTGCTAACGATTGGAACTCC TTCATTAAGGGTTCTAACGAATTCCACAACTTGATCGAATCTAAGGATGGTGAA GGTGGTTCTTCATCTTCTAACAGAGGTATTGATTCCGCCAATCAAATCAACACT ACTACTACCTCTACCATCAACGATATCGAACCTTTGTTGGTTTTCGTTTTCTGTG GTCAAGGTCCACAATGGAATGGTATGATTAAGACCTTGTACAACTCCGAGAACG TTTTCAAGAACACCGTTGATCATGTTGACAGCATCTTGTACAAGTACTTCGGTTA CTCCATTTTGAACGTCTTGTCTAAGATCGATGATAACGACGATTCCATCAACCAT CCAATAGTTGCTCAACCATCTTTGTTCTTGTTGCAAATTGGTTTGGTCGAGTTG TTTAAGTACTGGGGTATCTACCCATCTATCTCTGTTGGTCATTCTTTCGGTGAAG TCTCTTCTTATTACTTGTCCGGTATCATCTCTTTGGAAACCGCTTGTAAAATCGTC TACGTCAGATCCTCTAATCAGAACAAAACTATGGGTTCCGGTAAGATGTTGGTTG TTTCTATGGGTTTTAAGCAATGGAACGATCAATTCTCTGCTGAATGGTCCGATATT GAAATTGCTTGTTACAACGCTCCAGATTCCATAGTTGTTACTGGTAACGAAGAAA GATTGAAAGAATTGTCCATCAAGTTGTCCGACGAATCCAATCAAATTTTCAACAC CTTCTTGAGGTCCCCATGTTCTTTTCATTCTTCCCATCAAGAAGTCATCAAGGGT TCTATGTTCGAAGAGTTGTCTAACTTGCAATCTACTGGTGAAACCGAAATCCCTTT GTTCTCTACTGTTACTGGTAGACAAGTTTTGTCTGGTCATGTTACTGCTCAACACA TCTACGATAATGTTAGAGAACCAGTCTTGTTCCAAAAGACGATTGAATCCATTACCT CCTACATCAAGTCTCACTACCCATCCAATCAAAAGGTTATCTACGTTGAAATTGCTC CACACCCAACCTTGTTTTCATTGATCAAAAAGTCCATCCCATCCTCCAACAAGAATT CCTCTTCTGTTTTGTGTCCATTGAACAGAAAAGAAAACTCCAACAACTCCTACAAG AAGTTCGTTTCTCAGTTGTACTTCAACGGTGTTAACGTTGACTTCAACTTCCAGTTG AACTCCATTTGCGATAACGTTAACAACGATCACCATTTGAACAACGTCAAGCAAAAC TCCTTCAAAGAGACTACCAATTCCTTGCCAAGATACCAATGGGAACAAGATGAATAT TGGTCCGAACCATTGATCTCCAGAAAGAATAGATTGGAAGGTCCAACTACTTCCTTG TTGGGTCATAGAATTATCTACAGCTTCCCAGTTTTCCAATCCGTTTTGGACTTGCAAT CTGACAACTACAAATACTTGTTGGACCACTTGGTTAACGGTAAGCCAGTTTTTCCAG GTGCTGGTTATTTGGATATCATCATCGAATTCTTCGACTACCAAAAGCAGCAGTTGAA TTCCTCTGATTCCTCTAACTCCTACATCATCAACGTTGACAAGATCCAATTCTTGAAC CCAATTCACTTGACCGAAAACAAGTTGCAAACCTTGCAATCTTCTTTCGAACCTATC GTTACTAAGAAGTCTGCCTTCTCTGTTAACTTCTTCATCAAGGATACCGTCGAGGAT CAATCTAAGGTTAAGTCTATGTCTGACGAAACTTGGACTAACACTTGTAAGGCTACC ATTTCCTTGGAACAACAACAGCCATCTCCATCTTCTACTTTGACTTTGTCTAAGAAG CAAGACTTGCAGATCTTGAGAAACAGATGCGATATTAGCAAGCTAGACAAGTTTGA

Table A2. *Cont.*

	DNA Sequence
pSteelyA-2 sequencing	GTTGTACGACAAGATCTCTAAGAATTTGGGCTTGCAGTACAACTCCTTGTTTCAAG TTGTTGATACCATCGAAACTGGTAAGGATTGCTCTTTTGCTACTTTGTCTTTGCCAG AAGATACTTTGTTCACCACCATTTTGAACCCATGCTTGTTGGATAACTGTTTCCATG GTTTGTTGACCTTGATCAACGAAAAGGGTTCTTTCGTTGTCGAGTCCATTTCTTCT GTTTCTATCTACTTGGAGAACATCGGTTCCTTCAATCAAACTTCTGTTGGTAACGT CCAGTTCTACTTGTACACCACTATTTCTAAAGCCACCTCCTTTAGTTCTGAAGGTAC TTGTAAGTTGTTCACCAAGGATGGTTCCTTGATTTTGTCTATCGGTAAGTTCATCAT CAAGTCCACCAATCCAAAGTCTACTAAGACCAACGAAACTATCGAATCTCCATTGGA CGAAACCTTCTCTATTGAATGGCAATCTAAGGATTCTCCAATTCCAACCCCACAACA AATCCAACAACAATCTCCATTGAACTCTAACCCATCCTTCATTAGATCTACCATCTTG AAGGACATCCAGTTCGAACAATACTGCTCCTCCATTATCCACAAAGAATTGATCAAC CACGAAAAGTACAAGAACCAGCAATCCTTCGATATCAACTCCTTGGAAAACCACTTG AACGATGACCAATTGATGGAATCCTTGTCCATCTCCAAAGAATACTTGAGATTCTTC ACCAGGATCATCTCCATCATTAAGCAATACCCAAAGATCTTGAACGAAAAAGAGCTA AAAGAATTGAAAGAAATCATCGAATTGAAGTACCCATCCGAAGTTCAGTTGTTGGA ATTCGAAGTTATCGAGAAGGTGTCCATGATTATCCCAAAGTTGTTGTTCGAAAACGA CAAGCAATCTTCCATGACCTTGTTCCAAGATAACTTGTTGACCAGGTTCTACTCCAA TTCTAACTCTACCAGATTCTACTTGGAAAGGGTTTCCGAAATGGTCTTGGAATCTATT AGACCAATCGTCAGAGAAAAGAGGGTGTTCAGAATTTTGGAAATTGGTGCTGATAC AGCCTCTTTGTCTAATGTTGTTTTGACTAAGTTGAACACCTACTTGTCCACCTTGAA TTCTAATGGTGGTTCTGGTTACAACATCATCATTGAGTACACCTTCACCGATATTTCC GCCAACTTCATTATTGGTGAAATCCAAGAAACCATGTGCAACTTGTACCCAAACGTT ACTTTCAAGTTCTCCGTCTTGGACTTGGAGAAAGAGATTATTAACTCCTCCGATTTC TTGATGGGTGATTACGATATAGTTTTGATGGCCTACGTTATCCATGCCGTTTCTAACAT TAAGTTCTCCATCGAACAGTTGTACAAGTTGTTGTCTCCAAGAGGTTGGTTGTTGTG TATTGAACCTAAGTCCAACGTTGTGTTCTCCGATTTGGTTTTCGGTTGTTTTAATCAG TGGTGGAACTACTACGATGATATTAGAACTACCCACTGCTCCTTGTCTGAATCTCAAT GGAATCAGTTGTTGTTGAACCAGTCCTTGAACAACGAATCCTCTTCTTCTTCTAACT GTTACGGTGGTTTCTCCAACGTTTCTTTTATTGGTGGTGAAAAGGATGTCGACTCC CATTCTTTCATATTGCACTGCCAAAAAGAATCCATCTCCCAAATGAAGTTAGCCACC ACTATTAACAACGGTTTGTCATCTGGTTCCATCGTTATCGTTTTGAACTCTCAACAA TTGACCAACATGAAGTCCTACCCAAAGGTTATTGAGTATATTCAAGAGGCTACCTCT TTGTGCAAGACCATTGAAATTATCGATTCCAAGGACGTCTTGAACTCTACCAATTCA GTTTTGGAAAAGATCCAAAAGTCCTTGTTGGTGTTCTGTTTGTTGGGTTATGACTT GTTGGAGAACAACTACCAAGAACAGTCTTTCGAATACGTTAAGTTGTTGAACTTGA TCTCTACTACCGCCTCTTCATCTAATGATAAGAAACCACCAAAGGTCTTGTTGATCA CCAAGCAATCTGAAAGAATCTCCAGGTCTTTCTACTCCAGATCCTTGATTGGTATTT CCAGAACCTCTATGAACGAGTACCCAAATTTGTCCATTACCTCTATCGATTTGGATAC CAACGACTACTCATTGCAGTCTTTGTTGAAGCCAATCTTCAGCAACTCTAAGTTTTC CGACAACGAGTTCATCTTCAAAAAGGGCTTGATGTTCGTGTCCAGGATCTTTAAGA ACAAGCAGTTGCTAGAATCCTCCAACGCTTTTGAAACTGACTCTTCTAACTTGTACT GTAAGGCCTCTTCTGACTTGTCTTACAAGTACGCTATTAAGCAGTCTATGTTGACCG AAAATCAGATCGAAATCAAGGTTGAATGCGTCGGTATTAACTTCAAGGACAACCTAT TCTACAAGGGCTTGTTGCCACAAGAAATTTTCAGAATGGGTGACATCTACAATCCAC CATATGGTTTGGAATGCTCTGGTGTTATTACCAGAATTGGTTCTAACGTCACCGAATA CTCAGTTGGTCAAAATGTTTTTGGTTTCGCCAGACATTCTTTGGGTTCTCATGTTGT TACCAACAAGGATTTGGTTATCTTGAAGCCAGATACCATCTCATTTTCTGAAGCTGCT TCTATCCCAGTTGTTTACTGTACTGCTTGGTACTCCTTGTTCAACATTGGTCAGTTGTC TAACGAAGAATCCATCCTAATTCATTCTGCTACTGGTGGTGTAGGTTTGGCTTCTTTG AATTTGTTGAAAATGAAGAATCAGCAACAGCAACCATTGACCAATGTTTATGCTACTG TTGGCTCTAACGAGAAGAAGAAGTTCTTGATCGATAACTTCAACAACTTGTTCAAAG AGGACGGCGAAAACATTTTCTCTACCAGAGACAAAGAATACTCCAACCAGTTGGAA TCCAAGATCGATGTTATTTTGAACACCTTGTCCGGTGAATTCGTCGAATCTAATTTC AAGTCCTTGAGATCCTTCGGTAGATTGATTGATTTGTCTGCTACTCACGTTTACGCC AATCAACAAATTGGTCTAGGTAACTTCAAGTTCGACCACTTGTATTCTGCTGTTGAC

Table A2. *Cont.*

	DNA Sequence
pSteelyA-2 sequencing	TTGGAAAGATTGATCGACGAAAAACCTAAGTTGTTGCAGTCCATCTTGCAAAGAAT TACCAACTCTATCGTCAACGGTTCCTTGGAAAAAATTCCAATTACCATCTTCCCATC CACCGAAACTAAGGATGCTATCGAATTATTGTCCAAGAGATCCCATATCGGTAAAGT TGTTGTAGATTGCACCGATATCTCTAAGTGTAATCCTGTTGGTGATGTGATCACCAA CTTCTCTATGAGATTGCCAAAGCCAAACTACCAGTTGAATTTGAACTCCACCTTGTT GATTACTGGTCAGTCTGGTTTGTCTATCCCTTTGTTGAATTGGTTGTTGTCTAAGTC TGGTGGTAACGTTAAGAACGTTGTCATCATTTCTAAGTCCACCATGAAGTGGAAGTT GCAGACTATGATTTCCCATTTCGTTTCCGGTTTCGGTATCCATTTTAACTACGTTCAA GTCGACATCTCCAACTACGATGCTTTGTCTGAAGCTATTAAGCAATTGCCATCTGATT TGCCACCAATCACCTCTGTTTTTCATTTGGCTGCTATCTACAACGATGTTCCAATGGA TCAAGTTACCATGTCTACCGTTGAATCTGTTCATAACCCTAAAGTTTTGGGTGCCGTT AACTTGCATAGAATCTCTGTTTCTTTTGGTTGGAAGTTGAACCACTTCGTCTTGTTC TCTTCTATTACTGCTATTACCGGTTACCCAGACCAATCTATCTACAATTCTGCCAACTC TATTTTGGACGCTTTGTCCAACTTTAGAAGGTTTATGGGTTTGCCATCCTTCTCCATT AACTTGGGTCCAATGAAGGATGAAGGTAAGGTTTCTACCAACAAGAGCATCAAGAA GCTATTCAAGTCTAGAGGTTTGCCAAGCCTATCCTTGAACAAGTTATTTGGTTTGTT GGAGGTCGTCATCAACAACCCATCTAATCATGTTATCCCATCCCAATTGATTTGCTC CCCAATCGATTTCAAGACCTACATCGAATCTTTCTCAACTATGAGGCCAAAGTTGTT ACACTTGCAACCTACCATTTCCAAGCAGCAATCTTCTATCATTAACGATTCTACCAAG GCTTCCTCCAACATTTCATTGCAAGATAAGATCACCTCCAAGGTGTCTGATTTGTTG TCCATTCCAATCTCCAAGATCAACTTCGATCATCCATTGAAACACTACGGCTTGGAT TCTTTGTTGACCGTTCAATTCAAATCCTGGATCGACAAAGAATTCGAAAAGAACTT GTTCACCCATATCCAATTGGCCACCATCTCTATTAACTCATTCTTGGAAAAGGTGAA CGGCTTGTCTACAAACAATAACAACAACAACAATTCCAACGTCAAGTCCTCTCCAT CCATTGTCAAAGAAGAAATCGTTACCTTGGACAAGGATCAACAACCATTGCTATTG AAAGAACACCAGCACATTATCATCTCCCCAGATATTAGAATCAACAAGCCAAAGAGG GAATCCTTGATTAGAACCCCAATCTTGAACAAATTCAACCAGATCACCGAATCCAT TATCACTCCATCTACACCATCTTTGTCCCAATCCGATGTTTTGAAAACTCCACCAAT CAAGTCTTTGAACAACACTAAGAACTCCAGCTTGATTAACACCCCACCAATTCAAT CTGTCCAACAACATCAAAAGCAACAACAAAAGGTCCAAGTCATCCAACAACAGCA vACAACCATTATCCAGATTGTCCTACAAGAGCAACAACAACTCTTTCGTTTTGGGT ATCGGTATTTCTGTTCCAGGTGAACCTATTTCCCAACAATCCTTGAAAGACTCCAT CTCCAATGACTTTTCTGATAAGGCTGAAACTAACGAGAAGGTCAAGAGAATCTTT GAGCAATCTCAAATCAAGACCAGACACTTGGTTAGAGATTACACTAAGCCAGAG AACTCCATCAAGTTCAGACATTTGGAAACCATTACCGATGTGAACAACCAGTTC AAGAAAGTTGTTCCAGATTTGGCTCAACAAGCCTGTTTGAGAGCTTTGAAAGAT TGGGGTGGTGATAAGGGTGATATTACCCATATAGTTTCTGTTACCTCCACCGGTAT TATCATCCCAGATGTTAATTTCAAGTTGATCGACTTGTTGGGCTTGAACAAGGAT GTTGAAAGAGTGTCTTTGAACCTAATGGGTTGTTTGGCTGGTTTGAGTTCTTTG AGAACTGCTGCTTCTTTGGCTAAGGCTTCTCCAAGAAATAGAATTTTGGTTGTC TGTACCGAAGTCTGCTCCTTGCATTTTTCTAATACTGATGGTGGTGATCAAATGG TCGCCTCTTCTATTTTTGCTGATGGTTCTGCTGCTTACATTATTGGTTGTAACCC AAGAATTGAAGAAACCCCATTATACGAAGTCATGTGCTCCATTAACAGATCTTT CCCAAATACCGAAAACGCCATGGTTTGGGATTTGGAAAAAGAAGGTTGGAACT TGGGTTTGGATGCTTCTATTCCAATTGTCATTGGTTCTGGTATTGAAGCCTTCGT TGATACTTTGTTGGATAAGGCTAAGTTGCAAACTTCCACTGCTATTTCTGCTAAG GATTGCGAATTCTTGATTCATACTGGTGGCAAGTCCATCTTGATGAACATCGAAA ATTCCTTGGGTATCGACCCAAAGCAAACTAAGAATACTTGGGATGTTTACCATGC CTACGGCAATATGTCATCTGCCTCTGTTATTTTCGTTATGGATCATGCCAGAAAGT CCAAGTCTTTGCCAACTTACTCAATTTCTTTGGCTTTTGGTCCAGGTTTGGCTTT TGAAGGTTGTTTCTTGAAGAACGTCGTCGAACAGAAGCTCATTTCCGAAGAG GACTTGTAACCGCAACAACTACCTCGACTTTGGCTGGGACACTTTCAGTGAGG ACAAGAAGCTTCAGAAGCGTGCTATCGAACTCAACCAGGGACGTGCGGCACAA ATGGGCATCCTTGCTCTCATGGTGCACGAACAGTTGGGAGTCTCTATCCTTCCTT AAAAATTTAATTTTCATTAGTTGCAGTCACTCCGCTTTGGTTTCGCTAGTGATAATA

Table A2. *Cont.*

	DNA Sequence
pSteelyA-2 sequencing	AGTGACTGAGGTATGTGCTCTTCTTATCTCCTTTTGTAGTGTTGCTCTTATTTTAAA CAACTTTGCGGTTTTTTGATGACTTTGCGATTTTGTTGTTGCTTTGCAGTAAATTG CAAGATTTAATAAAAAAACGCAAAGCAATGATTAAAGGATGTTCAGAATGAAACTC ATGGAAACACTTAACCAGTGCATAAACGCTGGTCATGAAATGACGAAGGCTATCGC CATTGCACAGTTTAATGATGACAGCCCGGAAGCGAGGAAAATAACCCGGCGCTGG AGAATAGGTGAAGCAGCGGATTTAGTTGGGGTTTCTTCTCAGGCTATCAGAGATG CCGAGAAAGCAGGGCGACTACCGCACCCGGATATGGAAATTCGAGGACGGGTTG AGCAACGTGTTGGTTATACAATTGAACAAATTAATCATATGCGTGATGTGTTTGGT ACGCGATTGCGACGTGCTGAAGACGTATTTCCACCGGTGATCGGGGTTGCTGCC CATAAAGGTGGCGTTTACAAAACCTCAGTTTCTGTTCATCTTGCTCAGGATCTGG CTCTGAAGGGGCTACGTGTTTTGCTCGTGGAAGGTAACGACCCCCAGGGAACAG CCTCAATGTATCACGGATGGGTACCAGATCTTCATATTCATGCAGAAGACACTCTC CTGCCTTTCTATCTTGGGGAAAAGGACGATGTCACTTATGCAATAAAGCCCACTTG CTGGCCGGGGCTTGACATTATTCCTTCCTGTCTGGCTCTGCACCGTATTGAAACTG AGTTAATGGGCAAATTTGATGAAGGTAAACTGCCCACCGATCCACACCTGATGCTC CGACTGGCCATTGAAACTGTTGCTCATGACTATGATGTCATAGTTATTGACAGCGC GCCTAACCTGGGTATCGGCACGATTAATGTCGTATGTGCTGCTGATGTGCTGATTG TTCCCACGCCTGCTGAGTTGTTTGACTACACCTCCGCACTGCAGTTTTTCGATAT GCTTCGTGATCTGCTCAAGAACGTTGATCTTAAAGGGTTCGAGCCTGATGTACGT ATTTTGCTTACCAAATACAGCAATAGCAATGGCTCTCAGTCCCCGTGGATGGAGG AGCAAATTCGGGATGCCTGGGGAAGCATGGTTCTAAAAAATGTTGTACGTGAAAC GGATGAAGTTGGTAAAGGTCAGATCCGGATGAGAACTGTTTTTGAACAGGCCATT GATCAACGCTCTTCAACTGGTGCCTGGAGAAATGCTCTTTCTATTTGGGAACCTGT CTGCAATGAAATTTTCGATCGTCTGATTAAACCACGCTGGGAGATTAGATAATGAAG CGTGCGCCTGTTATTCCAAAACATACGCTCAATACTCAACCGGTTGAAGATACTTCG TTATCGACACCAGCTGCCCCGATGGTGGATTCGTTAATTGCGCGCGTAGGAGTAATG GCTCGCGGTAATGCCATTACTTTGCCTGTATGTGGTCGGGATGTGAAGTTTACTCTT GAAGTGCTCCGGGGTGATAGTGTTGAGAAGACCTCTCGGGTATGGTCAGGTAATGA ACGTGACCAGGAGCTGCTTACTGAGGACGCACTGGATGATCTCATCCCTTCTTTTCT ACTGACTGGTCAACAGACACCGGCGTTCGGTCGAAGAGTATCTGGTGTCATAGAAA TTGCCGATGGGAGTCGCCGTCGTAAAGCTGCTGCACTTACCGAAAGTGATTATCGT GTTCTGGTTGGCGAGCTGGATGATGAGCAGATGGCTGCATTATCCAGATTGGGTAA CGATTATCGCCCAACAAGTGCTTATGAACGTGGTCAGCGTTATGCAAGCCGATTGCA GAATGAATTTGCTGGAAATATTTCTGCGCTGGCTGATGCGGAAAATATTTCACGTAAG ATTATTACCCGCTGTATCAACACCGCCAAATTGCCTAAATCAGTTGTTGCTCTTTTTTC TCACCCCGGTGAACTATCTGCCCGGTCAGGTGATGCACTTCAAAAAGCCTTTACAGA TAAAGAGGAATTACTTAAGCAGCAGGCATCTAACCTTCATGAGCAGAAAAAAGCTGG GGTGATATTTGAAGCTGAAGAAGTTATCACTCTTTTAACTTCTGTGCTTAAAACGTCA TCTGCATCAAGAACTAGTTTAAGCTCACGACATCAGTTTGCTCCTGGAGCGACAGTA TTGTATAAGGGCGATAAAATGGTGCTTAACCTGGACAGGTCTCGTGTTCCAACTGAG TGTATAGAGAAAATTGAGGCCATTCTTAAGGAACTTGAAAAGCCAGCACCCTGATGC GACCTCGTTTTAGTCTACGTTTATCTGTCTTTACTTAATGTCCTTTGTTACAGGCCAGA AAGCATAACTGGCCTGAATATTCTCTCTGGGCCCACTGTTCCACTTGTATCGTCGGTC TGATAATCAGACTGGGACCACGGTCCCACTCGTATCGTCGGTCTGATTATTAGTCTGG GACCACGGTCCCACTCGTATCGTCGGTCTGATTATTAGTCTGGGACCACGGTCCCACT CGTATCGTCGGTCTGATAATCAGACTGGGACCACGGTCCCACTCGTATCGTCGGTCTGA TTATTAGTCTGGGACCATGGTCCCACTCGTATCGTCGGTCTGATTATTAGTCTGGGACC ACGGTCCCACTCGTATCGTCGGTCTGATTATTAGTCTGGAACCACGGTCCCACTCGTA TCGTCGGTCTGATTATTAGTCTGGGACCACGGTCCCACTCGTATCGTCGGTCTGATTA TTAGTCTGGGACCACGATCCCACTCGTGTTGTCGGTCTGATTATCGGTCTGGGACCA CGGTCCCACTTGTATTGTCGATCAGACTATCAGCGTGAGACTACGATTCCATCAATGC CTGTCAAGGGCAAGTATTGACATGTCGTCGTAACCTGTAGAACGGAGTAACCTCGGT GTGCGGTTGTATGCCTGCTGTGGATTGCTGCTGTGTCCTGCTTATCCACAACATTTTG CGCACGGTTATGTGGACAAAATACCTGGTTACCCAGGCCGTGCCGGCACGTTAACCG GGCTGCATCCGATGCAAGTGTGTCGCTGTCGACGAGCTCGCGAGCTCGGACATGAG

Table A2. *Cont.*

	DNA Sequence
pSteelyA-2 sequencing	GTTGCCCCGTATTCAGTGTCGCTGATTTGTATTGTCTGAAGTTGTTTTTACGTTAAGTT GATGCAGATCAATTAATACGATACCTGCGTCATAATTGATTATTTGACGTGGTTTGATG GCCTCCACGCACGTTGTGATATGTAGATGATAATCATTATCACTTTACGGGTCCTTTCC GGTGATCCGACAGGTTACGGGGCGGCGACCTCGCGGGTTTTCGCTATTTATGAAAAT TTTCCGGTTTAAGGCGTTTCCGTTCTTCTTCGTCATAACTTAATGTTTTTATTTAAAAT ACCCTCTGAAAAGAAAGGAAACGACAGGTGCTGAAAGCGAGCTTTTTGGCCTCTGT CGTTTCCTTTCTCTGTTTTTGTCCGTGGAATGAACAATGGAAGTCCGAGCTCATCGC TAATAACTTCGTATAGCATACATTATACGAAGTTATA
pSteelyA-3 sequencing	TTCGATGCGGCCGCAAGGGGTTCGCGTCAGCGGGTGTTGGCGGGTGTCGGGGCTG GCTTAACTATGCGGCATCAGAGCAGATTGTACTGAGAGTGCACCATATGCGGTGTGA AATACCACACAGATGCGTAAGGAGAAAATACCGCATCAGGCGCCATTCGCCATTCAG CTGCGCAACTGTTGGGAAGGGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAGCT GGCGAAAGGGGGATGTGCTGCAAGGCGATTAAGTTGGGTAACGCCAGGGTTTTCCC AGTCACGACGTTGTAAAACGACGGCCAGTGAATTGTAATACGACTCACTATAGGGCG AATTCGAGCTCGGTACCCGGGGATCCTCTAGAGTCGACCTGCAGGCATGCAAGCTT GAGTATTCTATAGTCTCACCTAAATAGCTTGGCGTAATCATGGTCATAGCTGTTTCCT GTGTGAAATTGTTATCCGCTCACAATTCCACACAACATACGAGCCGGAAGCATAAAG TGTAAAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCTCA CTGCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAATGAATCGGCCAA CGCGAACCCCTTGCGGCCGCCCGGGCCGTCGACCAATTCTCATGTTTGACAGCTTA TCATCGAATTTCTGCCATTCATCCGCTTATTATCACTTATTCAGGCGTAGCAACCAGG CGTTTAAGGGCACCAATAACTGCCTTAAAAAAATTACGCCCCGCCCTGCCACTCATC GCAGTACTGTTGTAATTCATTAAGCATTCTGCCGACATGGAAGCCATCACAAACGGC ATGATGAACCTGAATCGCCAGCGGCATCAGCACCTTGTCGCCTTGCGTATAATATTTG CCCATGGTGAAAACGGGGGCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAA CTGGTGAAACTCACCCAGGGATTGGCTGAGACGAAAAACATATTCTCAATAAACCCT TTAGGGAAATAGGCCAGGTTTTCACCGTAACACGCCACATCTTGCGAATATATGTGTA GAAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGAAAACGTTTCAGTT TGCTCATGGAAAACGGTGTAACAAGGGTGAACACTATCCCATATCACCAGCTCACCG TCTTTCATTGCCATACGAAATTCCGGATGAGCATTCATCAGGCGGGCAAGAATGTGA ATAAAGGCCGGATAAAACTTGTGCTTATTTTTCTTTACGGTCTTTAAAAAGGCCGTAA TATCCAGCTGAACGGTCTGGTTATAGGTACATTGAGCAACTGACTGAAATGCCTCAA AATGTTCTTTACGATGCCATTGGGATATATCAACGGTGGTATATCCAGTGATTTTTTTC TCCATTTTAGCTTCCTTAGCTCCTGAAAATCTCGATAACTCAAAAAATACGCCCGGTA GTGATCTTATTTCATTATGGTGAAAGTTGGAACCTCTTACGTGCCGATCAACGTCTC ATTTTCGCCAAAAGTTGGCCCAGGGCTTCCCGGTATCAACAGGGACACCAGGATTT ATTTATTCTGCGAAGTGATCTTCCGTCACAGGTATTTATTCGCGATAAGCTCATGGA GCGGCGTAACCGTCGCACAGGAAGGACAGAGAAAGCGCGGATCTGGGAAGTGAC GGACAGAACGGTCAGGACCTGGATTGGGGAGGCGGTTGCCGCCGCTGCTGCTGA CGGTGTGACGTTCTCTGTTCCGGTCACACCACATACGTTCCGCCATTCCTATGCGA TGCACATGCTGTATGCCGGTATACCGCTGAAAGTTCTGCAAAGCCTGATGGGACAT AAGTCCATCAGTTCAACGGAAGTCTACACGAAGGTTTTTGCGCTGGATGTGGCTG CCCGGCACCGGGTGCAGTTTGCGATGCCGGAGTCTGATGCGGTTGCGATGCTGAA ACAATTATCCTGAGAATAAATGCCTTGGCCTTTATATGGAAATGTGGAACTGAGTGG ATATGCTGTTTTTGTCTGTTAAACAGAGAAGCTGGCTGTTATCCACTGAGAAGCGA ACGAAACAGTCGGGAAAATCTCCCATTATCGTAGAGATCCGCATTATTAATCTCAGG AGCCTGTGTAGCGTTTATAGGAAGTAGTGTTCTGTCATGATGCCTGCAAGCGGTAA CGAAAACGATTTGAATATGCCTTCAGGAACAATAGAAATCTTCGTGCGGTGTTACG TTGAAGTGGAGCGGATTATGTCAGCAATGGACAGAACAACCTAATGAACACAGAA CCATGATGTGGTCTGTCCTTTTACAGCCAGTAGTGCTCGCCGCAGTCGAGCGACA GGGCGAAGCCCATCGATACTAGCTTGATTGGGATATCTCGCTCGTGCTTGTCGCG TGCTATGTCTTTTTAGGGTACTTTGAACCTACGTTCGTACTTGTGTAATATGATCAT CGTCGTCATCGTATTATCGTTTTTCATCCGTCCAGCGCAAAATGCATTAGCAGCTA GTCCTAGCGTGCGGAGCTACCTGTACAGGTGCATGACGGATGCGTGTCCTTAAG TGAGTTTCTAATTAACAGTAACTTCTTTACTTATGTTTCAGTTTGTAAGAAGCGG

Table A2. *Cont.*

	DNA Sequence
pSteelyA-3 sequencing	GATGCGCTCGTCGCTTGACATCTGATTGGACTGCGTCGGCACGTGAAAACTACA TTGTGAAATCTGCTAAAACTCCGGGTATCTCTGACACAAAACGATTCGGCTTCGC AATTTCAACATTACGGTCAAGGCTAACGTATCTTTCTCGGTCAACTTCAGATTATG CCGATTAAATTGTCGTAGCTTTCAAGGCGTTTTGAGTACTGCGGCAGTTGTTGAA CCTGCAAGGAGAAGATCTCGACAACAGAATAAAGCGAAAAATGGGTCTCATGCA CTAACACTCAGGCCTCCCTCATAATCTCTGTTTGAGTTTACCAACAACACATATAT ACATTTCGACAAAATGGCCAAGTTGACCAGTGCCGTTCCGGTGCTCACCGCGCG CGACGTCGCCGGAGCGGTCGAGTTCTGGACCGACCGGCTCGGGTTCTCCCGGG ACTTCGTGGAGGACGACTTCGCCGGTGTGGTCCGGGACGACGTGACCCTGTTC ATCAGCGCGGTCCAGGACCAGGTGGTGCCAGACAACACCCTGGCCTGGGTGTG GGTGCGCGGCCTGGACGAGCTGTACGCCGAGTGGTCGGAGGTCGTGTCCACGA ACTTCCGGGACGCCTCCGGGCCGGCCATGACCGAGATCGGCGAGCAGCCGTGG GGGCGGGAGTTCGCCCTGCGCGACCCGGCCGGCAACTGCGTGCACTTCGTGGC CGAGGAGCAGGACTGACCGACGCCGACCAACACCGCCGGTCCGACGCGGCCCG ACGGGTCCGAGGCCTCGGAGATCTGGGCCCATGCGGCCGCAACAACTACCTCGA CTTTGGCTGGGACACTTTCAGTGAGGACAAGAAGCTTCAGAAGCGTGCTATCGA ACTCAACCAGGGACGTGCGGCACAAATGGGCATCCTTGCTCTCATGGTGCACGA ACAGTTGGGAGTCTCTATCCTTCCTTAAAAATTTAATTTTCATTAGTTGCAGTCAC TCCGCTTTGGTTTCGTAACTATAACGGTCCTAAGGTAGCGAACGTTGCAGGCCAT GCTGTCCAGGCAGGTAGATGACGACCATCAGGGACAGCTTCAAGGATCGCTCGC GGCTCTTACCAGCCTAACTTCGATCATTGGACCGCTGATCGTCACGGCGATTTAT GCCGCCTCGGCGAGCACATGGAACGGGTTGGCATGGATTGTAGGCGCCGCCCTA TACCTTGTCTGCCTCCCCGCGTTGCGTCGCGGTGCATGGAGCCGGGCCACCTCG ACCTGAATGGAAGCCGGCGGCACCTCGCTAACGGATTCACCACTCCAAGAATTG GAGCCAATCAATTCTTGCGGAGAACTGTGAATGCGCAAACCAACCCTTGGCAGA ACATATCCATCGCGTCCGCCATCTCCAGCAGCCGCACGCGGCGCATCGGGGGGG GGGGGGGGGTTTCAATTCATCATTTTTTTTTATTCTTTTTTTTGATTTCGGTTTCC TTGAAATTTTTTTGATTCGGTAATCTCCGAACAGAAGGAAGAACGAAGGAAGGA GCACAGACTTAGATTGGTATATATACGCATATGTAGTGTTGAAGAAACATGAAATT GCCCAGTATTCTTAACCCAACTGCACAGAACAAAAACCTGCAGGAAACGAAGAT AAATCATGTCGAAAGCTACATATAAGGAACGTGCTGCTACTCATCCTAGTCCTGT TGCTGCCAAGCTATTTAATATCATGCACGAAAAGCAAACAAACTTGTGTGCTTCA TTGGATGTTCGTACCACCAAGGAATTACTGGAGTTAGTTGAAGCATTAGGTCCCA AAATTTGTTTACTAAAAACACATGTGGATATCTTGACTGATTTTTCCATGGAGGGC ACAGTTAAGCCGCTAAAAGGCATTATCCGCCAAGTACAATTTTTTACTCTTCGAAG ACAGAAAATTTGCTGACATTGGTAATACAGTCAAATTGCAGTACTCTGCGGGTGTA TACAGAATAGCAGAATGGGCAGACATTACGAATGCACACGGTGTGGTGGGCCCAG GTATTGTTAGCGGTTTGAAGCAGGCGGCGGAAGAAGTAACAAAGGAACCTAGAG GCCTTTTGATGTTAGCAGAATTGTCATGCAAGGGCTCCCTAGCTACTGGAGAATAT vACTAAGGGTACTGTTGACATTGCGAAGAGCGACAAAGATTTTGTTATCGGCTTTA TTGCTCAAAGAGACATGGGTGGAAGAGATGAAGGTTACCAAATAGGTGAAGTAGG CCCACCCGCGAGCGGGTGTTCCTTCTTCACTGTCCCTTATTCGCACCTGGCGGTG CTCAACGGGAATCCTGCTCTGCGAGGCTGGCCGGCTACCGCCGGCGTAACAGAT GAGGGCAAGCGGATGGCTGATGAAACCAAGCCAACCAGGAAGGGCAGCCCACC TATCAAGGTGTACTGCCTTCCAGACGAACGAAGAGCGATTGAGGAAAAGGCGGC GGCGGCCGGCATGAGCCTGTCGGCCTACCTGCTGGCCGTCGGCCAGGGCTACA AAATCACGGGCGTCGTGGACTATGAGCACGTCCGCGAGCTGGCCCGCATCAATG GCGACCTGGGCCGCCTGGGCGGCCTGCTGAAACTCTGGCTCACCGACGACCCG CGCACGGCGCGGTTCGGTGATGCCACGATCCTCGCCCTGCTGGCGAAGATCGA AGAGAAGCAGGACGAGCTTGGCAAGGTCATGATGGGCGTGGTCCGCCCGAGG GCAGAGCCATGACTTTTTTAGCCGCTAAAACGGCCGGGGGGTGCGCGTGATTG CCAAGCACGTCCCCATGCGCTCCATCAAGAAGAGGCACTTCGAGCTGTAAGTA CATCACCGACGAGCAAGGCAAGACGATCCGCGCCTGTTTTATTGAGAACGTTG TTCGTGTTGGCCTCAATGGTAGCGATGCGTCATTCAGCGAAGTTCTGGTGCTGA TGATGTGGTTCGCTTTGCCACTGGTCAATGTGGTAAGCCCGTGTAATGTCAGTA

Table A2. *Cont.*

	DNA Sequence
pSteelyA-3 sequencing	ACCTTTTTACTGATCTCAGCTTGAGCACGGTCGCTGATGAGCTTATCCATGGCC CCACGGTAACGGATATGATCCTCTAGGGCGTTGACAAATTCTTTGTCGGTTTTC ATGGGGTAGACGTCAGTGACCAGGGAACGTCTCCCTACAAAAAGTTGCGCATAC TTTGCTCCGTTGTCGACGGCAGGGGTGTCGGACCAGATTGTATCTGTGGCAACG GCCTCATTGCGTCAATGGACCTTTAAAGCCGGGAAACGAGACTTGAAATGTTTAC GTAGAGGTGCATTATAGACCTCACGCGCATATTGAGTGGTTGCAAAAATGGTTTTG CGAACGGTATCACTGGAGACCCATGCCAGGCAAGGACGGAGGGCATCATAATCAT GTTCATTGCGTTGGACAGCATGCTTGTTACACGTAAGTATACGGTCGAGAGCATCG TGACGTTGAGAATTACAGATGGCAACGTGTCGGTGCATGTATTGGCCGAGATTGTC AAATCGTGGCTCAATATATGGCATGCCAGGTAAGTCATGGATGTCGGTATGCCATTC AGCCTTCATGTCGATTTCGTTGTCGAGAACTGATGGGTCCCAGTCAACGTCAGAA GTAAGAACAACATGGGGAAGGGAATGAAGTTCATGACTGGTGGGTGCGCGCATAT CCATGTACGGAAGACCCTGTCGTATGTTTAGTGGGATGATGTAATCATCCAGGGTAA CAATACGTTGGTTGCCGCCCACGGTACGAGACCGATCTTGAACACAATTGTGGCAA TGTTCAAGTTGGGCGCTGGAATGGATGGTTTTACCTTTACCAAGATGCGCGTATTGA TGCATGATAACAACAATGGGCCCTCGTTGCGATTCGACAAGACCGGCAGCCGTGAC AATGTCTAGATTGGACAAGGTATGTTCATTTATACCGGTTATGTTGGCTGAACGTCCA GTTTTGTGCAGTACGGTAACATCACTCCCCGCAAGTCCACCGTTGGCACCGCGATC GACAAGTGCAGATGTGGTATTTTGTACTGTGTGTCGGGAGACTTGGTACTGTAACA CATTTGACTGAAGTGACTTGGTGGTACCATGAGGACGGAGGGAACCCGTTGATAC GGTGTTGCGTGACGCTGCAAGTACCTTACGTATGTCGCCTGGATCCATACGTCCAA CCCGATCAGAAAGATGTGCTAGGAGTTCCGTTTCTGGTGCACAATCATGAAAGGTA TCCACGGGAGTTCCATTGTTGTCGTCCGGGGCTGCGTCGCGACTGCCAGTTGCAT GTACATGCGCCATCAAGGGACGTGCCAATCCATTACTAACCGGGAGAACCTTAGCT GGGGCAGCCAATCCCTGAAGTATAGCCTTAGCATCATCTGAGAGCTGGTTCCACAT ATCTCTAGGGATATAAGGTCGTTCACGGTTAGTGGGCGTACTATGATGTCGGTTATT AGTACAATTCTCCCTGCGGGCATGCGCATTGGCTTCATAGAGTACGGAAGGTGACA AGTCAATATTGTAGTTAACATCCGGATCAGTGTCAAAGTCTGTAGGATGGTAAGAAA GATCAGTAGAATGAATACTACGCTTTTCCTTGGGACTACGGGAATTAGAGAAGTTGT TTCCTTTATTGTAGAGTGACGCTGAAGCAAGTAGAAGACTAAGGTAACTCTCGTAG CTAATAGGATTACCTCCTTTGGCTAGGTCAAGAGTGGCTGTGATCTTCACTTGACA AAGTTCCGGTACATTGTGGACAGCATTCTCCAAAAGACTAAGACACAGTTGCTTTG GGAGTTGCTCAGCCATTGGTACAGTATTGTGGTAGATACAAAGGTGGTTCTTCCAA TGAAGGATAAATCCTTCTGCTGTGCCTGTCCATGAGGATCCATATTTCGCCGTAGTT AGGTAACCAAGCGTGGTGGCTGAACTGATCTTCGCACTTGCTGATTCCGTATAGTG TTTGACAACTTTACAAAACACTTCTTGCGCAGTTCGCTCTAGCCTGGACAGAGAAG GGACAATCTTCGTCGTTAAGACTCGTGCGAATAGCAAAAGATCACAAAATAGCACAT CGGCACCGACCAACGATTATTTCCAAGGAAAAAAAGAATGCTTCACTACAAGAAATT GTGTCATCCCTATACAGAGTCTTGTTACTGTGACAGAAAATTGATGGAAGATGTGGC GGATTGCCTTTACACTAGCCAACTTGTTCGACTAATTGCAGCTTCTTCTGAGAGGCT TCACCGAGTAACGCGAAGAACACCGGTGTCTCGTACATGCTCGTCGGTGAACGCTC GTCCAATGACACCCCCCACTTTGTATCAATATCCCAACTTGGTAGTGAACTGGAATGA TACATGCAATTTCGCGCCGCATCAACAGCCACGGGCACCATCGACGAATAGACTCGGT CGAGCTGGTTGCCCTCGCCGCTGGGCTGGCGGCCGTCTATGGCCCTGCAAACGCGC CAGAAACGCCGTCGAAGCCGTGTGCGAGACACCGCGGCCGGCCGCCGGCGTTGTG GATACCTCGCGGAAAACTTGGCCCTCACTGACAGATGAGGGGCGGACGTTGACACT TGAGGGGCCGACTCACCCGGCGCGGCGTTGACAGATGAGGGGCAGGCTCGATTTC GGCCGGCGACGTGGAGCTGGCCAGCCTCGCAAATCGGCGAAAACGCCTGATTTTA CGCGAGTTTCCCACAGATGATGTGGACAAGCCTGGGGATAAGTGCCCTGCGGTATT GACACTTGAGGGGCGCGACTACTGACAGATGAGGGGCGCGATCCTTGACACTTGAG GGGCAGAGTGCTGACAGATGAGGGGCGCACCTATTGACATTTGAGGGGCTGTCCACA GGCAGAAAATCCAGCATTTGCAAGGGTTTCCGCCCGTTTTTCGGCCACCGCTAACCTG TCTTTTAACCTGCTTTTAAACCAATATTTATAAACCTTGTTTTTAACCAGGGCTGCGCCC TGTGCGCGTGACCGCGCACGCCGAAGGGGGGTGCCCCCCCTTCTCGAACCCTCCCG

Table A2. *Cont.*

	DNA Sequence
pSteelyA-3 sequencing	GTCGAGTGAGCGAGGAAGCACCAGGGAACAGCACTTATATATTCTGCTTACACACGAT GCCTGAAAAAACTTCCCTTGGGGTTATCCACTTATCCACGGGGATATTTTTATAATTATT TTTTTTATAGTTTTTAGATCTTCTTTTTTAGAGCGCCTTGTAGGCCTTTATCCATGCTGG TTCTAGAGAAGGTGTTGTGACAAATTGCCCTTTCAGTGTGACAAATCACCCTCAAATG ACAGTCCTGTCTGTGACAAATTGCCCTTAACCCTGTGACAAATTGCCCTCAGAAGAAG CTGTTTTTTCACAAAGTTATCCCTGCTTATTGACTCTTTTTTATTTAGTGTGACAATCTAA AAACTTGTCACACTTCACATGGATCTGTCATGGCGGAAACAGCGGTTATCAATCACAAG AAACGTAAAAATAGCCCGCGAATCGTCCAGTCAAACGACCTCACTGAGGCGGCATATAG TCTCTCCCGGGATCAAAAACGTATGCTGTATCTGTTCGTTGACCAGATCAGAAAATCTGA TGGCACCCTACAGGAACATGACGGTATCTGCGAGATCCATGTTGCTAAATATGCTGAAATA TTCGGATTGACCTCTGCGGAAGCCAGTAAGGATATACGGCAGGCATTGAAGAGTTTCGCG GGGAAGGAAGTGGTTTTTTATCGCCCTGAAGAGGATGCCGGCGATGAAAAAGGCTATGA ATCTTTTCCTTGGTTTATCAAACGTGCGCACAGTCCATCCAGAGGGCTTTACAGTGTACA TATCAACCCATATCTCATTCCCTTCTTTATCGGGTTACAGAACCGGTTTACGCAGTTTCGG CTTAGTGAAACAAAAGAAATCACCAATCCGTATGCCATGCGTTTATACGAATCCCTGTGTC AGTATCGTAAGCCGGATGGCTCAGGCATCGTCTCTCTGAAAATCGACTGGATCATAGAGC GTTACCAGCTGCCTCAAAGTTACCAGCGTATGCCTGACTTCCGCCGCCGCTTCCTGCAG GTCTGTGTTAATGAGATCAACAGCAGAACTCCAATGCGCCTCTCATACATTGAGAAAAA GAAAGGCCGCCAGACGACTCATATCGTATTTTCCTTCCGCGATATCACTTCCATGACGAC AGGATAGTCTGAGGGTTATCTGTCACAGATTTGAGGGTGGTTCGTCACATTTGTTCTGAC CTACTGAGGGTAATTTGTCACAGTTTTGCTGTTTCCTTCAGCCTGCATGGATTTTCTCATA CTTTTTGAACTGTAATTTTTAAGGAAGCCAAATTTGAGGGCAGTTTGTCACAGTTGATTT CCTTCTCTTTCCCTTCGTCATGTGACCTGATATCGGGGGTTAGTTCGTCATCATTGATGA GGGTTGATTATCACAGTTTATTACTCTGAATTGGCTATCCGCGTGTGTACCTCTACCTGGA GTTTTTCCCACGGTGGATATTTCTTCTTGCGCTGAGCGTAAGAGCTATCTGACAGAACAG TTCTTCTTTGCTTCCTCGCCAGTTCGCTCGCTATGCTCGGTTACACGGCTGCGGCGAGC ATCACGTGCTATAAAAATAATTATAATTTAAATTTTTTAATATAAATATATAAATTAAAAATAG AAAGTAAAAAAAGAAATTAAAGAAAAAATAGTTTTTGTTTTCCGAAGATGTAAAAGACT CTAGGGGGATCGCCAACAAATACTACCTTTTACCTTGCTCTTCCTGCTCTCAGGTATTAA TGCCGAATTGTTTCATCTTGTCTGTGTAGAAGACCACACACGAAAATCCTGTGATTTTA CATTTTACTTATCGTTAATCGAATGTATATCTATTTAATCTGCTTTTCTTGTCTAATAAATAT ATATGTAAAGTACGCTTTTTGTTGAAATTTTTTAAACCTTTGTTTATTTTTTTTTCTTCAT TCCGTAACTCTTCTACCTTCTTTATTTACTTTCTAAAATCCAAATACAAAACATAAAAATA AATAAACACAGAGTAAATTCCCAAATTATTCCATCATTAAAAGATACGAGGCGCGTGTAA GTTACAGGCAAGCGATCCTAGTACACTCTATATTTTTTTATGCCTCGGTAATGATTTTCAT TTTTTTTTTCCACCTAGCGGATGACTCTTTTTTTTTCTTAGCGATTGGCATTATCACATAA TGAATTATACATTATATAAAGTAATGTGATTTCTTCGAAGAATATACTAAAAAATGAGCAGG CAAGATAAACGAAGGCAAAGATGACAGAGCAGAAAGCCCTAGTAAAGCGTATTACAAAT GAAACCAAGATTCAGATTGCGATCTCTTTAAAGGGTGGTCCCCTAGCGATAGAGCACTC GATCTTCCCAGAAAAAGAGGCAGAAGCAGTAGCAGAACAGGCCACACAATCGCAAGTG ATTAACGTCCACACAGGTATAGGGTTTCTGGACCATATGATACATGCTCTGGCCAAGCAT TCCGGCTGGTCGCTAATCGTTGAGTGCATTGGTGACTTACACATAGACGACCATCACAC CACTGAAGACTGCGGGATTGCTCTCGGTCAAGCTTTTAAAGAGGCCCTAGGGGCCGTG CGTGGAGTAAAAAGGTTTGGATCAGGATTTGCGCCTTTGGATGAGGCACTTTCCAGAG CGGTGGTAGATCTTTCGAACAGGCCGTACGCAGTTGTCGAACTTGGTTTGCAAAGGGA GAAAGTAGGAGATCTCTCTTGCGAGATGATCCCGCATTTTCTTGAAAGCTTTGCAGAGG CTAGCAGAATTACCCTCCACGTTGATTGTCTGCGAGGCAAGAATGATCATCACCGTAGTG AGAGTGCGTTCAAGGCTCTTGCGGTTGCCATAAGAGAAGCCACCTCGCCCAATGGTACC AACGATGTTCCCTCCACCAAAGGTGTTCTTATGTAGTTTTACACAGGAGTCTGGACTTG ACATACAGTGAATGTAACTTTCGAATTGACAGTATTAGTAGTCGTATTGACAGTGAGGCA CGCCCCTCAATGTGCGAGGTGGAAAATATACCAGCATGACAATGAATCTTGGAGATTCT TTTGCTGTCATCAAGATTCACCGCCAAATCTTCAGGAACCTATCACGTCCACAGGCGAT GTTAATTCTTGAGTCGTCAAAACAAAGTCCTGTCCTACCTGTAGAAGTTGACAGCGAG CAATTGTATGCAAACTTCTGACTTTGTTATAATAACATTAAAGGTAATTAAGTATCTTCAA TTAGGCATTTTGTCACTGTCAGTCCGTTCCGACAATATAGGTAGATTTGGAATGAATCT

Table A2. *Cont.*

	DNA Sequence
pSteelyA-3 sequencing	TTTCTATGCTGCTGCGAATCTTGTACACCTTTGAGGCCGTAGATTCTGTCCGACGAAG CGATAATTATTGCAAAATACATGGACTCATTATTTTGATTCGATTTCTTTTTGGTATCCG ACTCGAAAAGATCCATCACGGCGAGCGCCACCATGAACAAGAACTCCAAAATCCAG TCCCCAAACTCTTCTGATGTTGCTGTTATTGGTGTTGGTTTTAGATTCCCAGGTAACT CTAATGACCCAGAATCTTTGTGGAACAACTTGTTGGATGGTTTCGATGCTATTACCC AAGTCCCAAAAGAAAGATGGGCTACTTCTTTTAGAGAGATGGGTTTGATCAAGAAC AAGTTCGGTGGTTTCTTGAAGGATTCTGAATGGAAGAATTTCGACCCTTTGTTCTT TGGTATCGGTCCAAAAGAAGCTCCATTCATTGATCCACAACAAAGGTTGTTGTTGT CCATCGTTTGGGAATCTTTGGAAGATGCTTACATCAGACCAGATGAATTGAGAGGTT CTAACACTGGTGTTTTCATCGGTGTTTCTAACAACGATTACACCAAGTTGGGTTTCC AAGACAACTACTCTATTTCTCCATACACTATGACCGGCTCTAACTCTTCATTGAACTC CAACAGAATTTCCTACTGCTTCGATTTTAGAGGTCCATCCATTACTGTTGATACCGCT TGTTCTTCTTCCTTGGTTTCTGTTAATTTGGGTGTCCAATCCATCCAAATGGGTGAAT GTAAGATTGCTATTTGCGGTGGTGTTAACGCTTTGTTTGATCCATCTACATCTGTTGC CTTTTCCAAGTTGGGTGTTTTGTCTGAAAATGGCAGATGCAACTCTTTTAGTGATCA AGCCTCTGGTTACGTTAGATCTGAAGGTGCTGGTGTTGTTGTTTTGAAGTCTTTGGA ACAAGCTAAGTTGGATGGTGATAGAATCTACGGTGTTATCAAGGGTGTTTCCTCTAAT GAAGATGGTGCTTCTAATGGTGACAAGAACTCTTTGACTACTCCATCTTGTGAAGCC CAATCCATTAACATTTCTAAGGCTATGGAAAAGGCCTCCTTGTCTCCATCTGATATCTA TTACATTGAAGCCCATGGTACTGGTACTCCAGTTGGTGATCCAATTGAAGTTAAGGC CTTGTCCAAGATCTTCTCCAACTCTAACAACAACCAGTTGAACAACTTCTCTACCGA TGGTAATGATAACGATGATGATGATGACGATAACACCTCTCCAGAACCATTATTGATT GGCTCATTCAAGTCCAACATCGGTCATTTGGAATCTGCTGCTGGTATTGCTTCTTTG ATTAAGTGTTGCTTGATGTTGAAGAACAGGATGTTGGTTCCATCCATTAACTGCTCT AATTTGAACCCATCCATTCCATTCGATCAGTACAACATCTCCGTTATCAGAGAAATCA GACAATTCCCAACCGATAAGTTGGTTAACATCGGTATCAATTCTTTCGGTTTCGGTGG TTCTAACTGCCATTTGATTATTCAAGAGTACAACAACAACTTCAAGAACAACTCTACC ATCTGCAATAACAACAACAACAACAATAACAACATCGACTACTTGATCCCAATCTCCT CTAAGACTAAGAAGTCCTTGGATAAGTACTTGATTTTGATCAAGACCAACTCCAACTA CCACAAGGATATTTCTTTCGATGACTTCGTCAAGTTCCAAATCAAGTCTAAGCAGTAC AACTTGTCCAACAGAATGACTACCATTGCTAACGATTGGAACTCCTTCATTAAGGGTT CTAACGAATTCCACAACTTGATCGAATCTAAGGATGGTGAAGGTGGTTCTTCATCTTC TAACAGAGGTATTGATTCCGCCAATCAAATCAACACTACTACTACCTCTACCATCAACG ATATCGAACCTTTGTTGGTTTTCGTTTTCTGTGGTCAAGGTCCACAATGGAATGGTAT GATTAAGACCTTGTACAACTCCGAGAACGTTTTCAAGAACACCGTTGATCATGTTGA CAGCATCTTGTACAAGTACTTCGGTTACTCCATTTTGAACGTCTTGTCTAAGATCGATG ATAACGACGATTCCATCAACCATCCAATAGTTGCTCAACCATCTTTGTTCTTGTTGCAA ATTGGTTTGGTCGAGTTGTTTAAGTACTGGGGTATCTACCCATCTATCTCTGTTGGTCA TTCTTTCGGTGAAGTCTCTTCTTATTACTTGTCCGGTATCATCTCTTTGGAAACCGCTT GTAAAATCGTCTACGTCAGATCCTCTAATCAGAACAAAACTATGGGTTCCGGTAAGAT GTTGGTTGTTTCTATGGGTTTTAAGCAATGGAACGATCAATTCTCTGCTGAATGGTCC GATATTGAAATTGCTTGTTACAACGCTCCAGATTCCATAGTTGTTACTGGTAACGAAG AAAGATTGAAAGAATTGTCCATCAAGTTGTCCGACGAATCCAATCAAATTTTCAACAC CTTCTTGAGGTCCCCATGTTCTTTTCATTCTTCCCATCAAGAAGTCATCAAGGGTTCT ATGTTCGAAGAGTTGTCTAACTTGCAATCTACTGGTGAAACCGAAATCCCTTTGTTCT CTACTGTTACTGGTAGACAAGTTTTGTCTGGTCATGTTACTGCTCAACACATCTACGAT AATGTTAGAGAACCAGTCTTGTTCCAAAAGACGATTGAATCCATTACCTCCTACATCAA GTCTCACTACCCATCCAATCAAAAGGTTATCTACGTTGAAATTGCTCCACACCCAACCT TGTTTTCATTGATCAAAAAGTCCATCCCATCCTCCAACAAGAATTCCTCTTCTGTTTTG TGTCCATTGAACAGAAAAGAAAACTCCAACAACTCCTACAAGAAGTTCGTTTCTCAGT TGTACTTCAACGGTGTTAACGTTGACTTCAACTTCCAGTTGAACTCCATTTGCGATAAC GTTAACAACGATCACCATTTGAACAACGTCAAGCAAAACTCCTTCAAAGAGACTACCA ATTCCTTGCCAAGATACCAATGGGAACAAGATGAATATTGGTCCGAACCATTGATCTCC AGAAAGAATAGATTGGAAGGTCCAACTACTTCCTTGTTGGGTCATAGAATTATCTACAG CTTCCCAGTTTTCCAATCCGTTTTGGACTTGCAATCTGACAACTACAAATACTTGTTGG

Table A2. *Cont.*

	DNA Sequence
pSteelyA-3 sequencing	ACCACTTGGTTAACGGTAAGCCAGTTTTTCCAGGTGCTGGTTATTTGGATATCATCATC GAATTCTTCGACTACCAAAAGCAGCAGTTGAATTCCTCTGATTCCTCTAACTCCTACAT CATCAACGTTGACAAGATCCAATTCTTGAACCCAATTCACTTGACCGAAAACAAGTTGC AAACCTTGCAATCTTCTTTCGAACCTATCGTTACTAAGAAGTCTGCCTTCTCTGTTAAC TTCTTCATCAAGGATACCGTCGAGGATCAATCTAAGGTTAAGTCTATGTCTGACGAAAC TTGGACTAACACTTGTAAGGCTACCATTTCCTTGGAACAACAACAGCCATCTCCATCTT CTACTTTGACTTTGTCTAAGAAGCAAGACTTGCAGATCTTGAGAAACAGATGCGATATT AGCAAGCTAGACAAGTTTGAGTTGTACGACAAGATCTCTAAGAATTTGGGCTTGCAGT ACAACTCCTTGTTTCAAGTTGTTGATACCATCGAAACTGGTAAGGATTGCTCTTTTGCT ACTTTGTCTTTGCCAGAAGATACTTTGTTCACCACCATTTTGAACCCATGCTTGTTGGA TAACTGTTTCCATGGTTTGTTGACCTTGATCAACGAAAAGGGTTCTTTCGTTGTCGAG TCCATTTCTTCTGTTTCTATCTACTTGGAGAACATCGGTTCCTTCAATCAAACTTCTGTT GGTAACGTCCAGTTCTACTTGTACACCACTATTTCTAAAGCCACCTCCTTTAGTTCTGAA GGTACTTGTAAGTTGTTCACCAAGGATGGTTCCTTGATTTTGTCTATCGGTAAGTTCATC ATCAAGTCCACCAATCCAAAGTCTACTAAGACCAACGAAACTATCGAATCTCCATTGGAC GAAACCTTCTCTATTGAATGGCAATCTAAGGATTCTCCAATTCCAACCCCACAACAAATCC AACAACAATCTCCATTGAACTCTAACCCATCCTTCATTAGATCTACCATCTTGAAGGACAT CCAGTTCGAACAATACTGCTCCTCCATTATCCACAAAGAATTGATCAACCACGAAAAGTAC AAGAACCAGCAATCCTTCGATATCAACTCCTTGGAAAACCACTTGAACGATGACCAATTG ATGGAATCCTTGTCCATCTCCAAAGAATACTTGAGATTCTTCACCAGGATCATCTCCATCA TTAAGCAATACCCAAAGATCTTGAACGAAAAAGAGCTAAAAGAATTGAAAGAAATCATCG AATTGAAGTACCCATCCGAAGTTCAGTTGTTGGAATTCGAAGTTATCGAGAAGGTGTCCA TGATTATCCCAAAGTTGTTGTTCGAAAACGACAAGCAATCTTCCATGACCTTGTTCCAAG ATAACTTGTTGACCAGGTTCTACTCCAATTCTAACTCTACCAGATTCTACTTGGAAAGGGT TTCCGAAATGGTCTTGGAATCTATTAGACCAATCGTCAGAGAAAAGAGGGTGTTCAGAAA TTTGGAAATTGGTGCTGATACAGCCTCTTTGTCTAATGTTGTTTTGACTAAGTTGAACACC TACTTGTCCACCTTGAATTCTAATGGTGGTTCTGGTTACAACATCATCATTGAGTACACCT TCACCGATATTTCCGCCAACTTCATTATTGGTGAAATCCAAGAAACCATGTGCAACTTGTA CCCAAACGTTACTTTCAAGTTCTCCGTCTTGGACTTGGAGAAAGAGATTATTAACTCCTC CGATTTCTTGATGGGTGATTACGATATAGTTTTGATGGCCTACGTTATCCATGCCGTTTCTA ACATTAAGTTCTCCATCGAACAGTTGTACAAGTTGTTGTCTCCAAGAGGTTGGTTGTTGT GTATTGAACCTAAGTCCAACGTTGTGTTCTCCGATTTGGTTTTCGGTTGTTTTAATCAGTG GTGGAACTACTACGATGATATTAGAACTACCCACTGCTCCTTGTCTGAATCTCAATGGAAT CAGTTGTTGTTGAACCAGTCCTTGAACAACGAATCCTCTTCTTCTTCTAACTGTTACGGT GGTTTCTCCAACGTTTCTTTTATTGGTGGTGAAAAGGATGTCGACTCCCATTCTTTCATAT TGCACTGCCAAAAAGAATCCATCTCCCAAATGAAGTTAGCCACCACTATTAACAACGGTTT GTCATCTGGTTCCATCGTTATCGTTTTGAACTCTCAACAATTGACCAACATGAAGTCCTACC CAAAGGTTATTGAGTATATTCAAGAGGCTACCTCTTTGTGCAAGACCATTGAAATTATCGATT CCAAGGACGTCTTGAACTCTACCAATTCAGTTTTGGAAAAGATCCAAAAGTCCTTGTTGGT GTTCTGTTTGTTGGGTTATGACTTGTTGGAGAACAACTACCAAGAACAGTCTTTCGAATAC GTTAAGTTGTTGAACTTGATCTCTACTACCGCCTCTTCATCTAATGATAAGAAACCACCAAA GGTCTTGTTGATCACCAAGCAATCTGAAAGAATCTCCAGGTCTTTCTACTCCAGATCCTTG ATTGGTATTTCCAGAACCTCTATGAACGAGTACCCAAATTTGTCCATTACCTCTATCGATTTG GATACCAACGACTACTCATTGCAGTCTTTGTTGAAGCCAATCTTCAGCAACTCTAAGTTTTC CGACAACGAGTTCATCTTCAAAAAGGGCTTGATGTTCGTGTCCAGGATCTTTAAGAACAAG CAGTTGCTAGAATCCTCCAACGCTTTTGAAACTGACTCTTCTAACTTGTACTGTAAGGCCTC TTCTGACTTGTCTTACAAGTACGCTATTAAGCAGTCTATGTTGACCGAAAATCAGATCGAAAT CAAGGTTGAATGCGTCGGTATTAACTTCAAGGACAACCTATTCTACAAGGGCTTGTTGCCAC AAGAAATTTTCAGAATGGGTGACATCTACAATCCACCATATGGTTTGGAATGCTCTGGTGTTA TTACCAGAATTGGTTCTAACGTCACCGAATACTCAGTTGGTCAAAATGTTTTTGGTTTCGCCA GACATTCTTTGGGTTCTCATGTTGTTACCAACAAGGATTTGGTTATCTTGAAGCCAGATACCA TCTCATTTTCTGAAGCTGCTTCTATCCCAGTTGTTTACTGTACTGCTTGGTACTCCTTGTTCAA CATTGGTCAGTTGTCTAACGAAGAATCCATCCTAATTCATTCTGCTACTGGTGGTGTAGGTTTG GCTTCTTTGAATTTGTTGAAAATGAAGAATCAGCAACAGCAACCATTGACCAATGTTTATGCT

Table A2. *Cont.*

	DNA Sequence
pSteelyA-3 sequencing	ACTGTTGGCTCTAACGAGAAGAAGAAGTTCTTGATCGATAACTTCAACAACTTGTTCAAAGA GGACGGCGAAAACATTTTCTCTACCAGAGACAAAGAATACTCCAACCAGTTGGAATCCA AGATCGATGTTATTTTGAACACCTTGTCCGGTGAATTCGTCGAATCTAATTTCAAGTCCT TGAGATCCTTCGGTAGATTGATTGATTTGTCTGCTACTCACGTTTACGCCAATCAAC AAATTGGTCTAGGTAACTTCAAGTTCGACCACTTGTATTCTGCTGTTGACTTGGAAAGA TTGATCGACGAAAAACCTAAGTTGTTGCAGTCCATCTTGCAAAGAATTACCAACTCTAT CGTCAACGGTTCCTTGGAAAAAATTCCAATTACCATCTTCCCATCCACCGAAACTAAG GATGCTATCGAATTATTGTCCAAGAGATCCCATATCGGTAAAGTTGTTGTAGATTGCA CCGATATCTCTAAGTGTAATCCTGTTGGTGATGTGATCACCAACTTCTCTATGAGATTGC CAAAGCCAAACTACCAGTTGAATTTGAACTCCACCTTGTTGATTACTGGTCAGTCTGGT TTGTCTATCCCTTTGTTGAATTGGTTGTTGTCTAAGTCTGGTGGTAACGTTAAGAACGTT GTCATCATTTCTAAGTCCACCATGAAGTGGAAGTTGCAGACTATGATTTCCCATTTCGTT TCCGGTTTCGGTATCCATTTTAACTACGTTCAAGTCGACATCTCCAACTACGATGCTTTG TCTGAAGCTATTAAGCAATTGCCATCTGATTTGCCACCAATCACCTCTGTTTTTCATTTG GCTGCTATCTACAACGATGTTCCAATGGATCAAGTTACCATGTCTACCGTTGAATCTGTT CATAACCCTAAAGTTTTGGGTGCCGTTAACTTGCATAGAATCTCTGTTTCTTTTGGTTGG AAGTTGAACCACTTCGTCTTGTTCTCTTCTATTACTGCTATTACCGGTTACCCAGACCAA TCTATCTACAATTCTGCCAACTCTATTTTGGACGCTTTGTCCAACTTTAGAAGGTTTATG GGTTTGCCATCCTTCTCCATTAACTTGGGTCCAATTAAGGATGAAGGTAAGGTTTCTAC CAACAAGAGCATCAAGAAGCTATTCAAGTCTAGAGGTTTGCCAAGCCTATCCTTGAAC AAGTTATTTGGTTTGTTGGAGGTCGTCATCAACAACCCATCTAATCATGTTATCCCATC CCAATTGATTTGCTCCCCAATCGATTTCAAGACCTACATCGAATCTTTCTCAACTATGA GGCCAAAGTTGTTACACTTGCAACCTACCATTTCCAAGCAGCAATCTTCTATCATTAAC GATTCTACCAAGGCTTCCTCCAACATTTCATTGCAAGATAAGATCACCTCCAAGGTGT CTGATTTGTTGTCCATTCCAATCTCCAAGATCAACTTCGATCATCCATTGAAACACTAC GGCTTGGATTCTTTGTTGACCGTTCAATTCAAATCCTGGATCGACAAAGAATTCGAAA AGAACTTGTTCACCCATATCCAATTGGCCACCATCTCTATTAACTCATTCTTGGAAAAG GTGAACGGCTTGTCTACAAACAATAACAACAACAACAATTCCAACGTCAAGTCCTCTC CATCCATTGTCAAAGAAGAAATCGTTACCTTGGACAAGGATCAACAACCATTGCTATT GAAAGAACACCAGCACATTATCATCTCCCCAGATATTAGAATCAACAAGCCAAAGAGG GAATCCTTGATTAGAACCCCAATCTTGAACAAATTCAACCAGATCACCGAATCCATTAT CACTCCATCTACACCATCTTTGTCCCAATCCGATGTTTTGAAAACTCCACCAATCAAGT CTTTGAACAACACTAAGAACTCCAGCTTGATTAACACCCCACCAATTCAATCTGTCCA ACAACATCAAAAGCAACAACAAAAGGTCCAAGTCATCCAACAACAGCAACAACCATTA TCCAGATTGTCCTACAAGAGCAACAACAACTCTTTCGTTTTGGGTATCGGTATTTCTG TTCCAGGTGAACCTATTTCCCAACAATCCTTGAAAGACTCCATCTCCAATGACTTTTC TGATAAGGCTGAAACTAACGAGAAGGTCAAGAGAATCTTTGAGCAATCTCAAATCAA GACCAGACACTTGGTTAGAGATTACACTAAGCCAGAGAACTCCATCAAGTTCAGACA TTTGGAAACCATTACCGATGTGAACAACCAGTTCAAGAAAGTTGTTCCAGATTTGGC TCAACAAGCCTGTTTGAGAGCTTTGAAAGATTGGGGTGGTGATAAGGGTGATATTAC CCATATAGTTTCTGTTACCTCCACCGGTATTATCATCCCAGATGTTAATTTCAAGTTGA TCGACTTGTTGGGCTTGAACAAGGATGTTGAAAGAGTGTCTTTGAACCTAATGGGTT GTTTGGCTGGTTTGAGTTCTTTGAGAACTGCTGCTTCTTTGGCTAAGGCTTCTCCAA GAAATAGAATTTTGGTTGTCTGTACCGAAGTCTGCTCCTTGCATTTTTCTAATACTGA TGGTGGTGATCAAATGGTCGCCTCTTCTATTTTTGCTGATGGTTCTGCTGCTTACATT ATTGGTTGTAACCCAAGAATTGAAGAAACCCCATTATACGAAGTCATGTGCTCCATTA ACAGATCTTTCCCAAATACCGAAAACGCCATGGTTTGGGATTTGGAAAAAGAAGGTT GGAACTTGGGTTTGGATGCTTCTATTCCAATTGTCATTGGTTCTGGTATTGAAGCCTT CGTTGATACTTTGTTGGATAAGGCTAAGTTGCAAACTTCCACTGCTATTTCTGCTAAG GATTGCGAATTCTTGATTCATACTGGTGGCAAGTCCATCTTGATGAACATCGAAAATT CCTTGGGTATCGACCCAAAGCAAACTAAGAATACTTGGGATGTTTACCATGCCTACG GCAATATGTCATCTGCCTCTGTTATTTCGTTATGGATCATGCCAGAAAGTCCAAGTC TTTGCCAACTTACTCAATTTCTTTGGCTTTTGGTCCAGGTTTGGCTTTTGAAGGTTG TTTCTTGAAGAACGTCGTCGAACAGAAGCTCATTTCCGAAGAGGACTTGTAACCGC AACAACTACCTCGACTTTGGCTGGGACACTTTCAGTGAGGACAAGAAGCTTCAGAA

Table A2. *Cont.*

	DNA Sequence
pSteelyA-3 sequencing	GCGTGCTATCGAACTCAACCAGGGACGTGCGGCACAAATGGGCATCCTTGCTCTCA TGGTGCACGAACAGTTGGGAGTCTCTATCCTTCCTTAAAAATTTAATTTTCATTAGTT GCAGTCACTCCGCTTTGGTTTCGCTAGTGATAATAAGTGACTGAGGTATGTGCTCTT CTTATCTCCTTTTGTAGTGTTGCTCTTATTTTAAACAACTTTGCGGTTTTTTGATGAC TTTGCGATTTTGTTGTTGCTTTGCAGTAAATTGCAAGATTTAATAAAAAAACGCAAA GCAATGATTAAAGGATGTTCAGAATGAAACTCATGGAAACACTTAACCAGTGCATAA ACGCTGGTCATGAAATGACGAAGGCTATCGCCATTGCACAGTTTAATGATGACAGC CCGGAAGCGAGGAAAATAACCCGGCGCTGGAGAATAGGTGAAGCAGCGGATTTAG TTGGGGTTTCTTCTCAGGCTATCAGAGATGCCGAGAAAGCAGGGCGACTACCGCAC CCGGATATGGAAATTCGAGGACGGGTTGAGCAACGTGTTGGTTATACAATTGAACAA ATTAATCATATGCGTGATGTGTTTGGTACGCGATTGCGACGTGCTGAAGACGTATTTC CACCGGTGATCGGGGTTGCTGCCCATAAAGGTGGCGTTTACAAAACCTCAGTTTCT GTTCATCTTGCTCAGGATCTGGCTCTGAAGGGGCTACGTGTTTTGCTCGTGGAAGG TAACGACCCCCAGGGAACAGCCTCAATGTATCACGGATGGGTACCAGATCTTCATAT TCATGCAGAAGACACTCTCCTGCCTTTCTATCTTGGGGAAAAGGACGATGTCACTTA TGCAATAAAGCCCACTTGCTGGCCGGGGCTTGACATTATTCCTTCCTGTCTGGCTCT GCACCGTATTGAAACTGAGTTAATGGGCAAATTTGATGAAGGTAAACTGCCCACCGA TCCACACCTGATGCTCCGACTGGCCATTGAAACTGTTGCTCATGACTATGATGTCAT AGTTATTGACAGCGCGCCTAACCTGGGTATCGGCACGATTAATGTCGTATGTGCTGC TGATGTGCTGATTGTTCCCACGCCTGCTGAGTTGTTTGACTACACCTCCGCACTGC AGTTTTTCGATATGCTTCGTGATCTGCTCAAGAACGTTGATCTTAAAGGGTTCGAGC CTGATGTACGTATTTTGCTTACCAAATACAGCAATAGCAATGGCTCTCAGTCCCCGTG GATGGAGGAGCAAATTCGGGATGCCTGGGGAAGCATGGTTCTAAAAAATGTTGTAC GTGAAACGGATGAAGTTGGTAAAGGTCAGATCCGGATGAGAACTGTTTTTGAACAG GCCATTGATCAACGCTCTTCAACTGGTGCCTGGAGAAATGCTCTTTCTATTTGGGAA CCTGTCTGCAATGAAATTTTCGATCGTCTGATTAAACCACGCTGGGAGATTAGATAAT GAAGCGTGCGCCTGTTATTCCAAAACATACGCTCAATACTCAACCGGTTGAAGATAC TTCGTTATCGACACCAGCTGCCCCGATGGTGGATTCGTTAATTGCGCGCGTAGGAGT AATGGCTCGCGGTAATGCCATTACTTTGCCTGTATGTGGTCGGGATGTGAAGTTTAC TCTTGAAGTGCTCCGGGGTGATAGTGTTGAGAAGACCTCTCGGGTATGGTCAGGTA ATGAACGTGACCAGGAGCTGCTTACTGAGGACGCACTGGATGATCTCATCCCTTCT TTTCTACTGACTGGTCAACAGACACCGGCGTTCGGTCGAAGAGTATCTGGTGTCAT AGAAATTGCCGATGGGAGTCGCCGTCGTAAAGCTGCTGCACTTACCGAAAGTGAT TATCGTGTTCTGGTTGGCGAGCTGGATGATGAGCAGATGGCTGCATTATCCAGATT GGGTAACGATTATCGCCCAACAAGTGCTTATGAACGTGGTCAGCGTTATGCAAGC CGATTGCAGAATGAATTTGCTGGAAATATTTCTGCGCTGGCTGATGCGGAAAATAT TTCACGTAAGATTATTACCCGCTGTATCAACACCGCCAAATTGCCTAAATCAGTTGT TGCTCTTTTTTCTCACCCCGGTGAACTATCTGCCCGGTCAGGTGATGCACTTCAA AAAGCCTTTACAGATAAAGAGGAATTACTTAAGCAGCAGGCATCTAACCTTCATG AGCAGAAAAAAGCTGGGGTGATATTTGAAGCTGAAGAAGTTATCACTCTTTTAAC TTCTGTGCTTAAAACGTCATCTGCATCAAGAACTAGTTTAAGCTCACGACATCAG TTTGCTCCTGGAGCGACAGTATTGTATAAGGGCGATAAAATGGTGCTTAACCTGG ACAGGTCTCGTGTTCCAACTGAGTGTATAGAGAAAATTGAGGCCATTCTTAAGGA ACTTGAAAAGCCAGCACCCTGATGCGACCTCGTTTTAGTCTACGTTTATCTGTCT TTACTTAATGTCCTTTGTTACAGGCCAGAAAGCATAACTGGCCTGAATATTCTCTCT GGGCCCACTGTTCCACTTGTATCGTCGGTCTGATAATCAGACTGGGACCACGGTC CCACTCGTATCGTCGGTCTGATTATTAGTCTGGGACCACGGTCCCACTCGTATCGT CGGTCTGATTATTAGTCTGGGACCACGGTCCCACTCGTATCGTCGGTCTGATAATC AGACTGGGACCACGGTCCCACTCGTATCGTCGGTCTGATTATTAGTCTGGGACCAT GGTCCCACTCGTATCGTCGGTCTGATTATTAGTCTGGGACCACGGTCCCACTCGTA TCGTCGGTCTGATTATTAGTCTGGAACCACGGTCCCACTCGTATCGTCGGTCTGAT TATTAGTCTGGGACCACGGTCCCACTCGTATCGTCGGTCTGATTATTAGTCTGGGA CCACGATCCCACTCGTGTTGTCGGTCTGATTATCGGTCTGGGACCACGGTCCCACT TGTATTGTCGATCAGACTATCAGCGTGAGACTACGATTCCATCAATGCCTGTCAAG GGCAAGTATTGACATGTCGTCGTAACCTGTAGAACGGAGTAACCTCGGTGTGCGG

Table A2. *Cont.*

	DNA Sequence
pSteelyA-3 sequencing	TTGTATGCCTGCTGTGGATTGCTGCTGTGTCCTGCTTATCCACAACATTTTGCGCA CGGTTATGTGGACAAAATACCTGGTTACCCAGGCCGTGCCGGCACGTTAACCGGG CTGCATCCGATGCAAGTGTGTCGCTGTCGACGAGCTCGCGAGCTCGGACATGAG GTTGCCCCGTATTCAGTGTCGCTGATTTGTATTGTCTGAAGTTGTTTTTACGTTAA GTTGATGCAGATCAATTAATACGATACCTGCGTCATAATTGATTATTTGACGTGGTT TGATGGCCTCCACGCACGTTGTGATATGTAGATGATAATCATTATCACTTTACGGGT CCTTTCCGGTGATCCGACAGGTTACGGGGCGGCGACCTCGCGGGTTTTCGCTATT TATGAAAATTTTCCGGTTTAAGGCGTTTCCGTTCTTCTTCGTCATAACTTAATGTTT TTATTTAAAATACCCTCTGAAAAGAAAGGAAACGACAGGTGCTGAAAGCGAGCTT TTTGGCCTCTGTCGTTTCCTTTCTCTGTTTTTGTCCGTGGAATGAACAATGGAAGT CCGAGCTCATCGCTAATAACTTCGTATAGCATACATTATACGAAGTTATA

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