

Exon	Primers (5' -> 3')	Enz.	Buff.	°C	DMSO
1	F: agcaaactccagccaagattt R: cggacagggacattcagagacag	LA	GC I	58	
2	F: gtatctcaaggagtgtcaggagca R: ctacaggtagcccctcttagcctta	Ex	Ex	63	
3	F: atccagactaggggagggagtgt R: agaggaagaagagcagatggttaagc	Ex	Ex	67	
4-5	F: gccacctgtgactaggccagacc R: gcagacctctaccccctgaat	Ex	Ex	63	
6	F: gggagagcattctgggaagc R: caaacccatggtgagaagatgg	Ex	Ex	60	
7	F: cgggtatccaccctgatttct R: atctaggtttgaggtctgaggtcc	Ex	Ex	63	
8	F: ccaaactcagccctcaggttcc R: ggaatctggtccctaactactca	Ex	Ex	63	
9	F: ggctgggacccctatgagtaggatta R: gatcttccctcaagacctttctgtc	Ex	Ex	63	
10	F: ggcaacatagcaagacctggttcc R: agcctcctctgectgtgtgttag	Ex	Ex	63	
11	F: ctgcactctgcagtcctca R: gtacagtggcatgatcaccagctca	LA	GC I	58	+
12	F: gggcaagtgcagaactcaagtcta R: atgaaagaggccaagtgtatggatg	Ex	Ex	67	
13	F: agtgacgttgccgcagttagc R: cttctcagaccctactccccaggt	LA	GC I	60	

Exon	Primers (5' -> 3')	Enz.	Buff.	°C	DMSO
14-15	F: tgaattcgtgaatccaagaaagacaag R: tgcccagaatgagaggtgaagc	Ex	Ex	58	
16	F: atggccgcttcacctctcattc R: agggagtgagcagagtctggag	Ex	Ex	67	
17	F: ctgtagatcctgccctgggtgcctac R: ctaagtcagggagaggggtgagagg	Ex	Ex	63	
18	F: tctttggatgtctgtctctctgg R: gggaaatgaggactaaaaggtcaaa	Ex	Ex	63	
19	F: agcctccaatatctgtccctttct R: agtctgatggttaggctgcagtg	Ex	Ex	67	
20	F: atcccaggactgcttccatgt R: ctgggattacaggcatgaacgat	Ex	Ex	63	
21-22	F: ctcacaggtgttcttgaaagagg R: gtcttacctctgcctgtctct	LA	GC I	58	
23	F: ggaagacagaagtcatgaagcctgag R: ctatgacctcaccctaaccaagtctc	Ex	Ex	63	+
24	F: gtcaggatcccataatagtcagag R: gctgagtcaggcagagatcagg	Ex	Ex	67	
25	F: ccaaagcctgtcttctaccaactc R: acagagtgaggcacagacagagg	Ex	Ex	67	
26-27	F: tctctccatttctgtgtgtctcc R: aactcaaagaagagcactgtggaag	Ex	Ex	67	
28	F: ctccgtgtgtgaccaggtgtag R: gtacaatgggggttctcaggttac	Ex	Ex	58	+

Exon	Primers (5' -> 3')	Enz.	Buff.	°C	DMSO
29	F: agaatggattagctctggggtaggtg R: actggggactgtcacactaaacttg	Ex	Ex	67	
30	F: aacttcctgttaaactcccagagga R: agaaaagtcttagtcccacaacc	LA	GC I	60	
31	F: atgggactctgaggtgtgtgttt R: gtttcatggaagttcaacaaggtg	Ex	Ex	67	
32-33	F: ccagagtttgaggtccagagtcaac R: cactgagtggaccagacc	Ex	Ex	67	
34	F: atgggtggatagtgatgaaggaaat R: gatgcatgtatctctggagtttgg	Ex	Ex	63	
35	F: gaatgattggcatgtgcatgag R: acagagatcttccaagttggcatt	Ex	Ex	63	
36-37	F: ggaagcaagagaagttcaaggaag R: aggtctcagagaaaagttagcatgg	Ex	Ex	60	
38	F: aaaaaggaatgaaaaactccatgc R: cctctactctgctatctacc	Ex	Ex	63	
39	F: cttccacattgttctggtccaagg R: cagaagttgggaagggaaatgttat	Ex	Ex	67	
40	F: gctgtcacagtgggtggctatgg R: agctgtcaccatctggggaag	Ex	Ex	63	
41	F: tcttctaccaacacccgaacctgat R: tgaatgagtgagctggtgaaaagt	Ex	Ex	60	
42	F: cttccagaggagcgcagacaa R: cagaatgagttggaatcagcaggt	Ex	Ex	63	

Exon	Primers (5' -> 3')	Enz.	Buff.	°C	DMSO
43	F: cctctgacaggaccagggtctaata R: ctcaagggtgcagcagtcattct	Ex	Ex	67	
44	F: ctggtgttacccttagaggtgttg R: gttttctcaggcggttctctac	LA	GC I	60	
45	F: agagcgtggaggagaacgccaat R: gttgtgtccccaacattgctagtc	Ex	Ex	67	
46	F: gtgtgtaaggaggaggagcaga R: tccccagcatcactctctcg	Ex	Ex	67	
47	F: cctctactccccagctaatccaag R: ggaattcagtgtttctcgtttca	Ex	Ex	63	
48-49	F: gtagtcatcagaagcttgatccttt R: gccctaactagtgcaggtttattgg	LA	GC I	58	
50	F: catatcatttgcataaccacacct R: tcaaccatagatctctagatcc	Ex	Ex	58	
51-53	F: gatgattgcagtggtgagtttgag R: atccacctagatgcaaacatgtga	Ex	Ex	58	+
54	F: gagcaggtaaagagactgagttgga R: ctctccttcccagatctcaggtt	Ex	Ex	67	
55-57	F: gagggggtagaatggactagtgg R: gtgtgttctgctgctgctct	Ex	Ex	67	
57	F: gcaatgtttccgtattctgtatcttc R: gtgtgttctgctgctgctct	Ex	Ex	63	
58	F: ggtgaagccaaagctgatagagac R: catgaacaggtgtcctaggtgagtc	Ex	Ex	67	

Exon	Primers (5' -> 3')	Enz.	Buff.	°C	DMSO
<b>59-60</b>	F: ccaatactttatccccatcattc R: <i>ggattacaatcctgtgaggtcagg</i>	Ex	Ex	63	
<b>61</b>	F: ggttcctctctcctgtctctctg R: <i>tgtcctgtctggagataggtctgt</i>	Ex	Ex	67	
<b>62-63</b>	F: gaggcactgtcctctgtcctcttag R: <i>ttacagcaagaaatccacacattca</i>	Ex	Ex	63	
<b>64</b>	F: agtcacaagactcgtacatggaagg R: <i>tgtcggggaaaattcttaacatcta</i>	LA	GC I	60	
<b>65</b>	F: ggaggagccgtttctatggagat R: <i>ataaactctggggttctgaatgtg</i>	Ex	Ex	63	
<b>66</b>	F: ggcaattcaatggtgtctgatgat R: <i>aacctacactctgactctcccaac</i>	Ex	Ex	67	
<b>67</b>	F: ctgctaggttgagatgctgtttg R: <i>aagaaaccaggaggaagagtcagaa</i>	Ex	Ex	67	
<b>68-69</b>	F: catctcctcctccaagatctctc R: <i>caggtaggaagtctagagggtgct</i>	LA	GC I	60	
<b>70</b>	F: tgtctcctcctcctcctgtatctt R: <i>ggaacagaagcaggggtttct</i>	Ex	Ex	63	
<b>71</b>	F: aaattgaggtgtcgtcggcagtt R: <i>gcattgtggtgttccctaaggt</i>	Ex	Ex	63	
<b>72-73</b>	F: gttgtgggtcaggaaggaggat R: <i>gccagagaccagtagaaagac</i>	Ex	Ex	63	
<b>74-76</b>	F: aacctgaatatggactcgacacag R: <i>aggacctgggggcattct</i>	Ex	Ex	67	

Exon	Primers (5' -> 3')	Enz.	Buff.	°C	DMSO
<b>76</b>	F: tggcttgagttagaaccaagtaggg R: <i>tgcctgaccagcaaaagtgatattta</i>	Ex	Ex	67	
<b>77-78</b>	F: cttataagatgggggtcctctccac R: <i>atggtgtacactccgtgggttagt</i>	Ex	Ex	67	
<b>79-81</b>	F: gttgaaggagtgtgtgtggatgtg R: <i>ctggactgaaagagcagaatcagaa</i>	Ex	Ex	67	
<b>82</b>	F: cgcataagatggtttactgtggctct R: <i>agtgtcttggaggaagggagctctg</i>	LA	GC I	58	
<b>83</b>	F: tcctgactgtcattgtgtgtgtt R: <i>cctccactgccagatcctcag</i>	LA	GC I	58	
<b>84</b>	F: gccctcacagtgtctttggagt R: <i>ctaattcagtaacccttccgtacc</i>	Ex	Ex	67	
<b>85-87</b>	F: tgcataaatgaataatgacctactg R: <i>aactgaccaaaggggcaagact</i>	Ex	Ex	63	
<b>88</b>	F: taagaggggagaaaaacgggttagg R: <i>ctggectattatggcttctcatca</i>	Ex	Ex	63	
<b>89</b>	F: gtcctctgggctggaaagagagg R: <i>tacaaacaaggaaagtgaggcttgc</i>	Ex	Ex	63	
<b>90</b>	F: gatgtcttgaggctgggttgag R: <i>cagctggacgaaatgtgtacaaaag</i>	Ex	Ex	67	
<b>91</b>	F: ctgacggcgcctatcctgt R: <i>agccagttctcctctgtgtgtgt</i>	LA	GC II	56	
<b>92</b>	F: atcataatctgcctcttctgtgtgga R: <i>cctgacctctggaggctcactct</i>	Ex	Ex	63	

Exon	Primers (5' -> 3')	Enz.	Buff.	°C
93	F: ctcatcatccccatgtaccagttacc R: <i>ctcaagaacaaggtgagcaggagag</i>	Ex	Ex	63
94	F: agagcccaggtactttgattgcag R: <i>caaagcecaataccttatecctca</i>	Ex	Ex	63
95	F: atctggtatggtcccagttcaatct R: <i>cctctgtcccaaccactttgagg</i>	LA	GC I	60
96	F: cacacagaccccagcaagatg R: <i>gtctcaaacctctgacctgtgat</i>	LA	GC II	60
97	F: gcaacagagtgagactccatctcaaa R: <i>ctgaggtgctactcagaaaggcaaa</i>	Ex	Ex	60
98-99	F: acctcccatttctcactcagagttt R: <i>agtcattctttggtcaggaacacc</i>	Ex	Ex	63
100	F: ctgatcctccatgtactcccaaac R: <i>gttcagtcctgtggctctacctg</i>	Ex	Ex	63
101	F: aggtagagccacagggactgaac R: <i>caactcctggactcaagtaatcgtc</i>	Ex	Ex	67
102	F: ggctgtctcagtcgttaccatgtct R: <i>gcgagaggtagagatggggtatgaa</i>	Ex	Ex	67
103-105	F: attaggggtgagattagggaaatgg R: <i>ggagcttttactgccactactga</i>	Ex	Ex	67
106	F: aacagagcaacacacctgtctaaaaa R: <i>gaaacaattcctggatgtccactc</i>	Ex	Ex	63

Enzymes	
Abbreviation	Trade name
Ex	<i>TaKaRa Ex Taq</i>
LA	<i>TaKaRa LA Taq</i>

Buffers		
Abbreviation	Trade name	Mg <sup>2+</sup> content (mM)
Ex	10 X <i>Ex Taq</i> Buffer	20
GC I	2 X GC Buffer I	5
GC II	2 X GC Buffer II	5

PCR protocol (38 cycles)		
	Temp (°C)	Time (s)
Denature	95	30
Annealing	<i>see table</i>	30
Extension	72	45

**PCR conditions**  
**by annealing temperature**

58°C			
Exon	Enzyme	Buffer	DMSO
14-15	Ex		
28			+
50			
51-53			+
1	LA	GC I	
11			+
21-22			
48-49			
82			
83			

60°C			
Exon	Enzyme	Buffer	DMSO
6	Ex		
36-37			
41			
97			
13	LA	GC I	
30			
44			
64			
68-69			
91			+
95			
96		GC II	

63°C			
Exon	Enz/Buff	DMSO	
2	Ex Taq / Ex Buffer		
4-5			
7			
8			
9			
10			
17			
18			
20			
23			
34			
35			
38			
40			
42			
47			
57			
59-60			
62-63			
65			
70			
71			
72-73			
85-87			
88			
89			
92			
93			
94			
98-99			
100			
106			
			+

67°C		
Exon	Enz/Buff	
3	Ex Taq / Ex Buffer	
12		
16		
19		
24		
25		
26-27		
29		
31		
32-33		
39		
43		
45		
46		
54		
55-56		
58		
61		
66		
67		
74-75		
76		
77-78		
79-81		
84		
90		
101		
102		
103-105		