

**Table S1. List of corresponding primer pairs for 16 amplicons representing *Apc*,  $\beta$ -catenin, and *Kras***

Name	Sens	ID GenBank, position	Sequence	Length	Tm(°C)
APC A	forward	NC_000084.6: 34312278-34312296	tcccggctcaagtctgcca	19	60,7
APC A	reverse	NC_000084.6: 34312690-34312709	gctatctgggctcagtggt	20	59,4
APC B	forward	NC_000084.6:34312689-34312709	taccactgcagcccagatagc	21	58,7
APC B	reverse	NC_000084.6: 34313042-34313062	gggctaggtcagctggatact	21	57,8
APC C	forward	NC_000084.6: 34313041-34313062	cagtatccagctgacctagccc	22	58,8
APC C	reverse	NC_000084.6: 34313254-34313278	agacaggataactggtgtctggct	25	59,1
APC D	forward	NC_000084.6: 34313254-34313278	agccagaacaccagttatcctgtct	25	59,1
APC D	reverse	NC_000084.6: 34313734-34313756	gctgaacttgacgcagctgatt	23	60
APC E	forward	NC_000084.6: 34313734-34313756	aatcagctcgtccaagttcagc	23	60
APC E	reverse	NC_000084.6: 34314176-34314195	gagcggagtctcctggacat	20	58,1
APC F	forward	NC_000084.6: 34314176-34314199	atgtccaggagactccgctcgtat	24	60,5
APC F	reverse	NC_000084.6: 34314466-34314485	accctctgcacggcagcatt	20	61,6
<i>Kras</i>	forward	NC_000072.6: 145247097-145247077	cctttgagagccattagctgc	21	56,2
<i>Kras</i>	reverse	NC_000072.6: 145246708-145246687	agcgttacctctatcgtagggt	22	56,2
beta-cat	forward	NC_000075.6: 120950465-120950490	cgtagatggcttctcaggtagcatt	26	58,2
beta-cat	reverse	NC_000075.6: 120950787-120950807	gctgtcacacagccctgtcaa	21	59,7