

Supplementary Table S1. Primers designed for analyzing gene expression of Neddylation pathway genes

Pathway	Enzyme	Name	Primer	Length (bp)	Amplicon Length (bp)
Neddylation					
E1	APPBP1	5'-CTTCCTTCAAAGAAGCAGTATCGG-3'		24	139
		5'-CTGGACTCTCTTCCACAAAACCTTC-3'		24	
E1	UBA3	5'-GGTCGCTGGAACCATGTAAAGA-3'		22	129
		5'-GCCAGCTCCAATGACTAGAACTTT-3'		24	
E2	UBC12 (UBE2M)	5'-TCCAGAAGGACATAAACGAGCTG-3'		23	97
		5'-GGACAGATGACCAGCTTGAAGT-3'		22	
	NEDD8	5'-GAACCTACAGACAAGGTGGAGC-3'		22	119
		5'-GCTGCTGTCTTCTCATCATTTCATC-3'		24	

Supplementary Table S2. Primers designed for analyzing gene expression of SUMOylation pathway genes

Enzyme	Targets in	Name	Primer	Length (bp)	Amplicon Length (bp)
SUMOylation pathway					
E1	SAE1	5'-AGTCATTTTTCACTCAATTCGATGCT-3'		26	122
		5'-GCCAAAACATCTCCTGTAAAGAAC-3'		25	
E1	SAE2	5'-GCTGGGTATCTTGGACAAGTAACT-3'		24	92
		5'-CCAGGAAAGGTTCTCTGGGTC-3'		21	
E2	UBC9 (UBE2I)	5'-GCCATTCCAGGAAAGAAAGGGA-3'		22	90
		5'-TGGTGGCGAAGATGGATAATCATC-3'		24	
	SUMO1	5'-GGCAAAACCTTCAACTGAGGAC-3'		22	91
		5'-GTGAATCTCACTGCTATCCTGTCC-3'		24	