

The *Leishmania donovani* SENP Protease is Required for SUMO Processing but not for Viability

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Table S1: Oligonucleotides used for targeting constructs

Name	Sequence (5'-3')	Application
G00	AAAAGCACCGACTCGGTGCCACTTTTTCAA GTTGATAACGGACTAGCCTTATTTAACTTG CTATTTCTAGCTCTAAAAC	Generation of SUMO ^{-/-} line using CRISPR/Cas9
LdBPK_080480 downstream reverse	GCTGCGCGTGCCACGATGGACGTTGCGA CCAATTTGAGAGACCTGTGC	
LdBPK_080480 upstream forward	CCCCTCCCCTCCCTGCCGTCGCGTCGCACG GTATAATGCAGACCTGTGC	
LdBPK_080480 3'gRNA	GAAATTAATACGACTCACTATAGGGGGAAG GAGGGAGAGTTTGGGTTTTAGAGCTAGAAA TAGC	
LdBPK_080480 5'gRNA	GAAATTAATACGACTCACTATAGGTAGCGAA GAAGCACAGCAAGTTTTAGAGCTAGAAAT AGC	
LdBPK_262070 upstream forward	ATACACACACACACACACGCAAATATACCCgta taatgcagacctgctgc	Generation of SENP ^{-/-} line using CRISPR/Cas9
LdBPK_262070 downstream reverse	CGGTACAGAGCGTTCATGTGCCTCTCTCTCcca at ttgagagacctgctgc	
LdBPK_262070 5'gRNA	gaaattaatacactcactataggAGAGGGATT CTCCTCCTTTGgttttagagctagaaatagc	
LdBPK_262070 3'gRNA	gaaattaatacactcactataggTCTGTCTGC ACGAATGCATGgttttagagctagaaatagc	
LdBPK_080480_BamHI_rev	GGAGGGATCCTCATAGCTGCCTCACCACGC	N-terminal tagging of SUMO
LdBPK_080480_NdeI_fwd	GGAGCATATGATGGAGCATCCGGAGCACAC	
KpnI_LdBPK_080480_rev	GGAGGGTACCTAGCTGCCTCACCACGCACC	C-terminal tagging of SUMO
KpnI_LdBPK_080480_fwd	GGAGGGTACCATGGAGCATCCGGAGCACAC	
KpnI_LdBPK_262070_fwd	GGAGGGTACCATGAACTCGCAGCCGTCGAC	pCL2N-SENP
BamHI_LdBPK_262070_rev	GGAGGGATCCTCAGACGCCGCTGGACGACG	
pIR-P-fwd2	GGCTCTGCGTTTCACTTGC	Sequencing primer
pIR-P-rev	GCGAACTGGTCGTAGAAATC	

Table S2. Primers used for RT-qPCR and PCR.

Name	Sequence (5' to 3')	Application
5'-UTR-LdBPK_080480.1_ EcoRI	GAGGGAATTCATTTAAATAAACCATGTTATCGCGTATG	Genotyping of expected SUMO ^{-/-} mutants
LdBPK_080480.1_BamHI	GAGGGGATCCTCATAGCTGCCTCACCACG	
3'-UTR-LdBPK_080480_ HindIII	GAGGAAGCTTATTTAAATCAGGCTGCTTGGCTTCCCAC	
LdBPK_080480_NdeI	GAGGCATATGGAGCATCCGGAGCACAC	
LdBPK_262070 qPCR fwd	TATCACCTCTCGATTCTTG CAG	SENP cDNA detection
LdBPK_262070 qPCR rev	ACAGCTCCTCTTGATGTCGTATC	
Cas9 qPCR fwd	CGAGAAGCTGTACCTGTACTACC	Cas9 cDNA detection
Cas9 qPCR rev	CACGATATGGTCCACATCGTAGT	

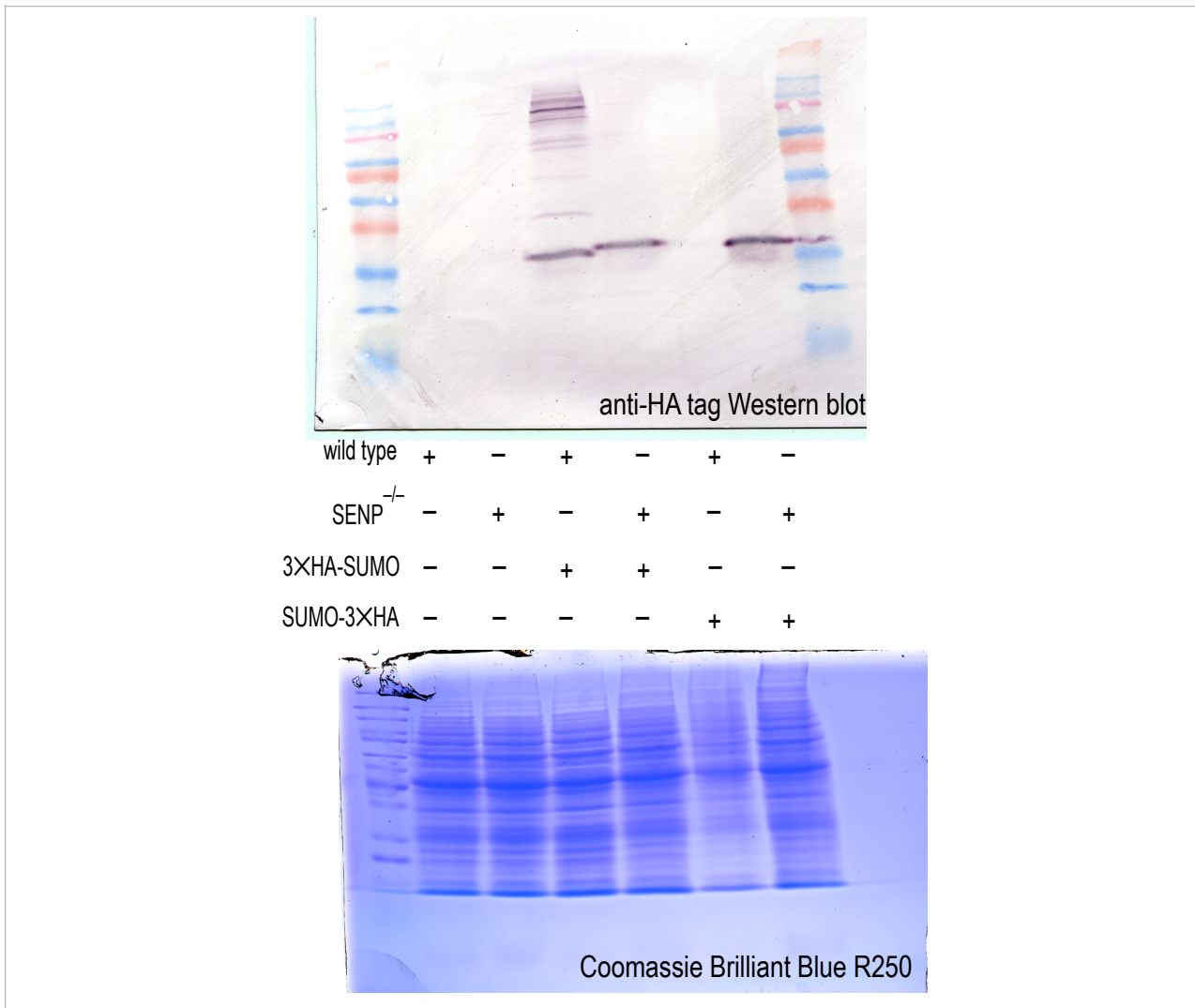


Figure S1: Images of original Western blot and Coomassie Brilliant Blue-stained PA gel.