

SUMOYLATION



CAPTURE THE DIVERSITY OF THE PROTEOME

Sumoylation is a novel post-translational modification system that has been the object of intense interest in recent years. Analogous to ubiquitin, reversible covalent attachment of the small ubiquitin-like modifier (SUMO) to lysine residues in substrate proteins alters the properties of the proteins to which SUMO conjugates. However, in contrast to ubiquitin, SUMO conjugation does not typically lead to degradation of the substrate; rather, sumoylation orchestrates a diverse array of effects on many different biological processes, including protein localization and stability, transcriptional activities, nucleocytoplasmic signalling and transport, and genomic replication, as well as the regulation of gene expression and viral reproduction. Three SUMO isoforms, SUMO-1, SUMO-2 and SUMO-3, have been identified in mammals, with distinct functions. The SUMO-2 and SUMO-3 proteins share 95% amino acid sequence identity, but only approximately 47% identity with SUMO-1. SUMO-1 conjugates to proteins as a monomer, while SUMO-2 and SUMO-3 conjugate to proteins as higher molecular weight polymers with SUMO-1 terminating further SUMO addition. SUMO protein modification proceeds through an E1-E2-E3 enzyme catalyzed cascade of activation (E1), conjugation to E2 (UBC9) and finally to the terminal amino group of a lysine side chain in target proteins, which may require E3 (ligase). E1 and E2 are the same for all three proteins, while several different SUMO ligases (E3) have been identified in higher eukaryotes. Dozens of protein substrates with important functions modified by sumoylation have been identified, and the list is growing as scientists begin to appreciate the abundance and the impact of this post-translational modification. In addition to tumor suppressors p53 (plus regulatory proteins) and PML, these include transcription factors such as receptors for androgen, progesterone and glucocorticoids, c-Jun, c-Myb, and the C/EBP proteins. DNA repair and replication targets include topoisomerase I and II, PCNA, and histone deacetylase, with other modified proteins including heat shock proteins and signal transduction molecules. An extensive panel of antibodies against each of the SUMO proteins and the enzymes associated with this critical modification will be an important tool to help researchers gain deeper insight into the diverse and far reaching effects of this protein modification.

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LIST OF PRODUCTS

Catalog #	Product Title	Catalog #	Product Title
AP1299a	Pan SUMO Antibody	AP1262a	AOS1 Antibody
AP1290a	Pan SUMO Antibody	AP2511b	AOS1 C-term Antibody
AP1222a	SUMO1 C-term Antibody	AP2511a	AOS1 N-term Antibody
AM1200a	SUMO1 Monoclonal Antibody	AP1258a	Cbl C-term Antibody
AM1200b	SUMO1 Monoclonal Antibody	AP1257a	Cbl N-term Antibody
AP1222c	SUMO1 N-term A6 Antibody	AP1254a	MDM2 C-term Antibody
AP1221a	SUMO1 N-term Antibody	AP1253a	MDM2 N-term Antibody
AP1222d	SUMO1 N-term E67 Antibody	AP1227a	NEDD8 C-term Antibody
AP1282a	SUMO2 C-term Antibody	AP1226a	NEDD8 N-term Antibody
AP1224a	SUMO2/3 C-term Antibody	AP2510a	NYREN18 N-term Antibody
AP1223d	SUMO2/3 Center Antibody	AP1243a	PIAS1 C-term Antibody
AP1223a	SUMO2/3 N-term Antibody	AP1242a	PIAS1 N-term Antibody
AP1223c	SUMO2/3 N-term K5 Antibody	AP1245a	PIAS3 C-term Antibody
AP1225a	SUMO3 C-term Antibody	AP1244a	PIAS3 N-term Antibody
AP1225b	SUMO3 C-term P94 Antibody	AP1280b	PIASny Center Antibody
AP1287b	Drosophila SUMO C-term Antibody	AP1280a	PIASny N-term Antibody
AP1287a	Drosophila SUMO N-term Antibody	AP1248a	PIASx1 N-term Antibody
AP1286b	Mouse SUMO3 C-term Antibody	AP1247a	PIASx1/2 C-term Antibody
AP1286a	Mouse SUMO3 N-term Antibody	AP1246a	PIASx1/2 N-term Antibody
AP1288b	Nematode SUMO C-term Antibody	AP1250a	PIASy1 C-term Antibody
AP1288a	Nematode SUMO N-term Antibody	AP1249a	PIASy1 N-term Antibody
AP1284b	Xenopus SUMO1 C-term Antibody	AP1251a	PIASz N-term Antibody
AP1284a	Xenopus SUMO1 N-term Antibody	AP1252a	PIASz1 C-term Antibody
AP1285b	Xenopus SUMO2 C-term Antibody	AP1231a	SENP1 C-term Antibody
AP1285a	Xenopus SUMO2 N-term Antibody	AP1230a	SENP1 N-term Antibody
AP1289a	Yeast SUMO N-term Antibody	AP1233a	SENP2 C-term Antibody
AP2509a	ANDR Sumoylation site Antibody	AP1232a	SENP2 N-term Antibody
AP2507b	AP-1 Sumoylation site Antibody	AP1235a	SENP3 C-term Antibody
AP2508a	ARNT2 Sumoylation site Antibody	AP1234a	SENP3 N-term Antibody
AP2501a	HSF1 Sumoylation site Antibody	AP1237a	SENP5 C-term Antibody
AP2502a	HSF2 Sumoylation site Antibody	AP1236a	SENP5 N-term Antibody
AP2500a	Myb Sumoylation site Antibody	AP1239a	SENP6 C-term Antibody
AP2505b	P53 Sumoylation site Antibody	AP1238a	SENP6 N-term Antibody
AP2504b	PML Sumoylation site Antibody	AP1241a	SENP7 C-term Antibody
AP2504a	PML Sumoylation site Antibody	AP1240a	SENP7 N-term Antibody
AP2503a	Ran-GTPase Sumoylation site Antibody	AP1260a	SENP8 C-term Antibody
AP1261a	UBC9 Antibody	AP1259a	SENP8 N-term Antibody
AM1261a	UBC9 Antibody	AP1229a	Ubiquitin C-term Antibody
AM1261b	UBC9 Antibody	AP1228a	Ubiquitin N-term Antibody

SELECTED PRODUCT INFORMATION

Name	Pan SUMO	Pan SUMO	SUMO1	SUMO2	SUMO2/3	SUMO3	NEDD8	PIASx1/2	SENP2	AOS1
Epitope										
Catalog #	AP1299a	AP1290a	AP1222a	AP1282a	AP1224a	AP1225a	AP1226a	AP1246a	AP1232c	AP2511a
Western Blotting										
IHC										

- BC-Breast Carcinoma - HC-Hepatocarcinoma - IHC-Immunohistochemistry -



ABGENT develops innovative reagents and technologies to profile *post-translational modifications*, which dynamically regulate the functional proteome. These modifications forge a vital link between genotype and phenotype. By targeting these *post-translational modifications*, ABGENT serves scientists exploring the complex paths between cell signaling and pathology.

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