

**#14066** Store at -20°C

## SUMO-2/3 (18H8) Rabbit mAb (HRP Conjugate)


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<b>Applications:</b> WB	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P55854, #P61956	<b>Entrez-Gene Id:</b> 6612, 6613
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<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibodies.	
<b>Specificity / Sensitivity</b>	SUMO-2/3 (18H8) Rabbit mAb (HRP Conjugate) detects endogenous levels of SUMO-2/3 protein. It does not cross-react with recombinant SUMO-1 protein.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide from the amino terminus of human SUMO-3 protein.	
<b>Product Description</b>	This Cell Signaling Technology antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody is expected to exhibit the same species cross-reactivity as the unconjugated SUMO-2/3 (18H8) Rabbit mAb #4971.	
<b>Background</b>	<p>Small ubiquitin-related modifier 1, 2 and 3 (SUMO-1, -2 and -3) are members of the ubiquitin-like protein family (1). The covalent attachment of the SUMO-1, -2 or -3 (SUMOylation) to target proteins is analogous to ubiquitination. This post-translational modification is a reversible, multi-step process that is initiated by cleaving a precursor protein to a mature protein. Mature SUMO-1, -2 or -3 is then linked to the activating enzyme E1, conjugated to E2 and in conjunction with E3, SUMO-1, -2 or -3 is ligated to the target protein (2). Ubiquitin and the individual SUMO family members are all targeted to different proteins with diverse biological functions. Ubiquitin predominantly regulates degradation of its target (1). In contrast, SUMO-1 is conjugated to RanGAP, PML, p53 and IκB-α to regulate nuclear trafficking, formation of subnuclear structures, regulation of transcriptional activity and protein stability (3-7). SUMO-2/-3 forms poly-(SUMO) chains, is conjugated to topoisomerase II and APP, regulates chromosomal segregation and cellular responses to environmental stress, and plays a role in the progression of Alzheimer disease (8-11).</p>	
<b>Background References</b>	<ol style="list-style-type: none"> <li>Schwartz, D.C. and Hochstrasser, M. (2003) <i>Trends Biochem. Sci.</i> 28, 321-8.</li> <li>Kim, K.I. et al. (2002) <i>J. Cell Physiol.</i> 191, 257-68.</li> <li>Matunis, M.J. et al. (1996) <i>J. Cell Biol.</i> 135, 1457-70.</li> <li>Duprez, E. et al. (1999) <i>J. Cell Sci.</i> 112, 381-93.</li> <li>Gostissa, M. et al. (1999) <i>EMBO J.</i> 18, 6462-74.</li> <li>Rodriguez, M.S. et al. (1999) <i>EMBO J.</i> 18, 6455-61.</li> <li>Desterro, J.M. et al. (1998) <i>Mol. Cell</i> 2, 233-9.</li> <li>Tatham, M.H. et al. (2001) <i>J. Biol. Chem.</i> 276, 35368-74.</li> <li>Azuma, Y. et al. (2003) <i>J. Cell Biol.</i> 163, 477-87.</li> <li>Li, Y. et al. (2003) <i>Proc. Natl. Acad. Sci. USA</i> 100, 259-64.</li> <li>Saitoh, H. and Hinchey, J. (2000) <i>J. Biol. Chem.</i> 275, 6252-8.</li> </ol>	
<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).	
<b>Western Blot Buffer</b>	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.	
<b>Applications Key</b>	<b>WB:</b> Western Blotting	
<b>Cross-Reactivity Key</b>		

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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