

MATERIAL DATA SHEET

Recombinant Human SUMO2 Agarose

Cat. # UL-755

Human Small Ubiquitin-like Modifier 2 (SUMO2), also known as Sentrin2 and SMT3B is synthesized as a 95 amino acid (aa), propeptide with a predicted 11 kDa. SUMO2 contains a two aa C-terminal prosegment and an 18 aa N-terminal protein interacting region between aa 33-50. Human SUMO2 shares 100% aa sequence identity with mouse SUMO2. SUMO2 also has very high aa sequence identity with SUMO3 and SUMO4, 86% and 85%, respectively. SUMO2 shares only 44% aa sequence identity with SUMO1. SUMOs are a family of small, related proteins that can be enzymatically attached to a target protein by a post-translational modification process termed SUMOylation (1-3). All SUMO proteins share a conserved Ubiquitin domain and a C-terminal diglycine cleavage/attachment site. Following prosegment cleavage, the C-terminal glycine residue of SUMO2 is enzymatically attached to a lysine residue on a target protein. In humans, SUMO2 is conjugated to a variety of molecules in the presence of the SAE1/UBA2 SUMO-activating (E1) enzyme and the UBE2I/Ubc9 SUMO-conjugating (E2) enzyme (4,5). In yeast, the SUMO-activating (E1) enzyme is Aos1/Uba2p (6). Because of the high level of aa sequence identity most studies report effects of SUMO2/3. For example, post-translational addition of SUMO2/3 was shown to modulate the function of ARHGAP21, a RhoGAP protein known to be involved in cell migration (7). Other reports indicate that the SUMOylation with SUMO2/3, but not SUMO1, may represent an important mechanism to protect neurons during episodes of cerebral ischemia (8,9). However, studies suggest that SUMO2/3 expression is regulated in an isoform-specific manner since oxidative stress downregulated the transcription of SUMO3 but not SUMO2 (10).

SUMO2 covalently coupled to agarose beads via primary amines allow for a fully functional C-terminus. Useful for isolation and capture of SUMO2 interacting proteins such as the SUMO activating E1 enzyme, the SUMO carrier enzyme Ubch9, SUMO E3 ligases, SENPs, and other proteins/enzymes that have an affinity for SUMO proteins.

Product Information

Quantity:	500 µl
Source:	<i>E. coli</i> -derived Accession # NM_006937
Stock:	250 µl of agarose supplied as 500 µl total volume in 50 mM HEPES pH 8, 250 mM NaCl, 0.09% sodium azide
Purity:	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Use & Storage

Use: SUMO2 Agarose is ideal for the enrichment of known SUMO2-interacting proteins as well as the discovery of novel SUMO2-interacting proteins. We recommend equilibrating the resin by washing with 5-10 mL of your desired aqueous buffer.

Storage: **Do not freeze.**

- 3 months from date of receipt, 2 to 8 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after opening.

Literature

References:

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