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Goat Anti-SENP6 / SUSP1 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1968a

Specification

Goat Anti-SENP6 / SUSP1 Antibody - Product Information

Application	**WB, E**
Primary Accession	Q9GZR1
Other Accession	NP_056386, 26054, 215351 (mouse), 300860 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**126146**

Goat Anti-SENP6 / SUSP1 Antibody - Additional Information

Gene ID 26054

Other Names
Sentrin-specific protease 6, 3.4.22.68, SUMO-1-specific protease 1, Sentrin/SUMO-specific protease SENP6, SENP6, KIAA0797, SSP1, SUSP1

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-SENP6 / SUSP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-SENP6 / SUSP1 Antibody - Protein Information

Name SENP6

Synonyms KIAA0797, SSP1, SUSP1

Function
Protease that deconjugates SUMO1, SUMO2 and SUMO3 from targeted proteins. Processes preferentially poly-SUMO2 and poly-SUMO3 chains, but does not efficiently process SUMO1, SUMO2 and SUMO3 precursors. Deconjugates SUMO1 from RXRA, leading to transcriptional activation. Involved in chromosome alignment and spindle assembly, by regulating the kinetochore CENPH-CENPI-CENPK complex. Desumoylates PML and CENPI, protecting them from degradation by the ubiquitin ligase RNF4, which targets polysumoylated proteins for proteasomal degradation. Also desumoylates RPA1, thus preventing recruitment of RAD51 to the DNA damage foci to initiate DNA repair through homologous recombination.

Cellular Location
Nucleus

Tissue Location
Highly expressed in reproductive organs, such as testis, ovary and prostate

Goat Anti-SENP6 / SUSP1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-SENP6 / SUSP1 Antibody - Images

AF1968a (0.5 µg/ml) staining of HeLa cell nuclear lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

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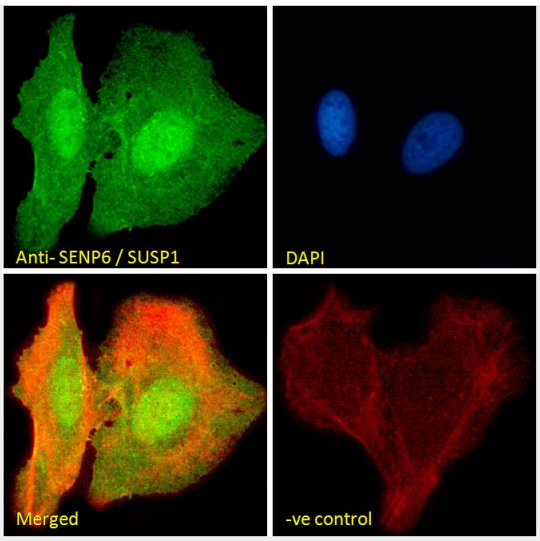
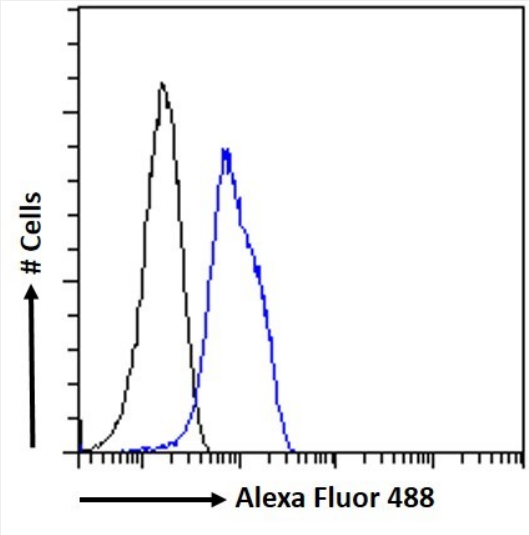


EB08330 Immunofluorescence analysis of paraformaldehyde fixed U2OS cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml), showing nuclear and cytoplasmic staining. Actin filaments were stained with phalloidin (red) and the nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml).



EB08330 Flow cytometric analysis of paraformaldehyde fixed U2OS cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (1ug/ml). IgG control: Unimmunized goat IgG (black line) followed by Alexa Fluor 488 secondary antibody.

Goat Anti-SENP6 / SUSP1 Antibody - Background

Ubiquitin-like molecules (UBLs), such as SUMO1 (UBL1; MIM 601912), are structurally related to ubiquitin (MIM 191339) and can be ligated to target proteins in a similar manner as ubiquitin. However, covalent attachment of UBLs does not result in degradation of the modified proteins. SUMO1 modification is implicated in the targeting of RANGAP1 (MIM 602362) to the nuclear pore complex, as well as in stabilization of I-kappa-B-alpha (NFKBIA; MIM 164008) from degradation by the 26S proteasome. Like ubiquitin, UBLs are synthesized as precursor proteins, with 1 or more amino acids following the C-terminal glycine-glycine residues of the mature UBL protein. Thus, the tail sequences of the UBL precursors need to be removed by UBL-specific proteases, such as SENP6, prior to their conjugation to target proteins (Kim et al., 2000 [PubMed 10799485]). SENPs also

display isopeptidase activity for deconjugation of SUMO-conjugated substrates (Lima and Reverter, 2008 [PubMed 18799455]).

Goat Anti-SENP6 / SUSP1 Antibody - References

The SUMO protease SENP6 is essential for inner kinetochore assembly. Mukhopadhyay D, et al. J Cell Biol, 2010 Mar 8. PMID 20212317.
Structure of the human SENP7 catalytic domain and poly-SUMO deconjugation activities for SENP6 and SENP7. Lima CD, et al. J Biol Chem, 2008 Nov 14. PMID 18799455.
Global, in vivo, and site-specific phosphorylation dynamics in signaling networks. Olsen JV, et al. Cell, 2006 Nov 3. PMID 17081983.
SUSP1 antagonizes formation of highly SUMO2/3-conjugated species. Mukhopadhyay D, et al. J Cell Biol, 2006 Sep 25. PMID 17000875.
Negative modulation of RXRalpha transcriptional activity by small ubiquitin-related modifier (SUMO) modification and its reversal by SUMO-specific protease SUSP1. Choi SJ, et al. J Biol Chem, 2006 Oct 13. PMID 16912044.