Revision 4

#5591 Store at -20C

SENP3 (D20A10) XP® Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC	H M R Mk	Endogenous	75	Rabbit IgG	#Q9H4L4	26168

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (Immunocytochemistry)	1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

SENP3 (D20A10) XP® Rabbit mAb detects endogeneous levels of total SENP3 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Phe48 of human SENP3 protein.

Background

SENP3 is a member of the SENP (sentrin/SUMO-specific protease) family. The SUMO protease localizes to the nucleolus and catalyzes the release of SUMO2 and SUMO3 monomers from sumoylated substrates (1,2). SENP3 has been reported responsible for the removal of SUMO2/3 from many important target proteins, and regulates their function and stability. Desumoylation of MEF2D (removal of SUMO2/3) leads to an increase of MEF2D transcriptional activation (3). SENP3 enhances the binding of HIF-1α to p300 by deconjugation of SUMO2/3 from p300, leading to the upregulation of HIF-1α transcriptional activity and angiogenesis (4). SENP3 localizes to nucleolus through its binding to the nucleolar protein nucleophosmin (NPM1) (5), and its deconjugation activity towards NPM1 is required for rRNA processing during ribosomal biogenesis (6). Under mild oxidative stress, SENP3 colocalizes with PML, and desumoylates and inhibits the function of PML to promote cell proliferation (7). SENP3 levels are tightly controlled in cells; NPM1, Arf, CHIP, and HSP90 have been shown to regulate the stability of SENP3, either by direct or indirect interaction (8,9).

Background References

1. Nishida, T. et al. (2000) *Eur J Biochem* 267, 6423-7.
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3. Grégoire, S. and Yang, X.J. (2005) *Mol Cell Biol* 25, 2273-87.
4. Huang, C. et al. (2009) *EMBO J* 28, 2748-62.
5. Yun, C. et al. (2008) *J Cell Biol* 183, 589-95.
6. Haindl, M. et al. (2008) *EMBO Rep* 9, 273-9.
7. Han, Y. et al. (2010) *J Biol Chem* 285, 12906-15.
8. Kuo, M.L. et al. (2008) *Cell Cycle* 7, 3378-87.
9. Yan, S. et al. (2010) *EMBO J*, Epub ahead of print.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

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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