

SENP1core Antibody (SUMO1/sentrin/SMT3 specific peptidase 1)

Cat. # AB701

Background

SENP1 is a SUMO isopeptidase that plays a critical role in the development of prostate cancer. SENP1 is overexpressed in prostate cancer samples and transgenic overexpression of SENP1 in the prostate of mice leads to the development of prostatic intraepithelial neoplasia at an early age¹. Consistent with the model stated above, investigators have demonstrated that overexpression of SENP1 enhances androgen-receptor mediated transcription^{1,2}. Inactivation of SENP1 in mice by retroviral insertion mutation is embryonic lethal (e12.5-e14.5) and leads to an increase in the steady state levels of SUMOylated forms of a number of proteins³. Depletion of SENP1 levels in PC3 cells by RNAi leads to a decrease in cyclin D1 expression¹. Transgenic overexpression of SENP1 in the prostate of mice leads to neoplasia at an early age¹. All of these experiments demonstrate that SENP1 plays a crucial role in the growth and development of organisms. Reinforcing the potential role SENP1 may play in prostate cancer is the observation that SENP1 is overexpressed in many prostate cancer samples¹.

Alternate Names: Sentrin/SUMO-specific protease SENP1, Sentrin specific protease 1

Molecular Weight: 28kDa

Specificity/Applications

Species Cross Reactivity: Human

Source: Chicken

Applications: WB

Recommended Antibody Dilutions:

Western Blotting: Robust detection of 100ng of recombinant protein was possible when antibody was used at a final concentration of 5µg/mL

Storage/Purification

Polyclonal antibodies are produced by immunizing chickens with recombinant protein corresponding to residues 415-643 of human SENP1. Antibodies are purified from egg yolks.

Storage: Supplied in phosphate buffered saline containing 10% glycerol.

Store at -20°C.

Do not aliquot the antibody.

References

1) Cheng, J., et al., Role of desumoylation in the development of prostate cancer. *Neoplasia*, 2006. 8(8): p. 667-76.

2) Yamaguchi, T., et al., Mutation of SENP1/SuPr-2 reveals an essential role for desumoylation in mouse development. *Mol Cell Biol*, 2005. 25(12): p. 5171-82.

3) Cheng, J., et al., SENP1 enhances androgen receptor-dependent transcription through desumoylation of Copyright © 2007 LifeSensors, Inc. All Rights Reserved

histone deacetylase 1. Mol Cell Biol, 2004. 24(13): p. 6021-6028.

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CONTACT: | LifeSensors, Inc. | 271 Great Valley Parkway | Malvern, PA 19355 | 610.644.8845 | www.lifesensors.com

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