

SP-100 (H-60): sc-25568

BACKGROUND

The human SP100 gene encodes an autoantigen that co-localizes with PML and NDP52 in distinct nuclear domains, called nuclear dots (NDs) or ND10 nuclear bodies. Papova-, adeno-, and herpesviruses begin their transcription and DNA-replication at NDs, which play a role in autoimmunity, viral infections and in the etiology of acute promyelocytic leukemia. SP-100 is an interferon-inducible protein that has two splice variants. One splice variant contains a highly conserved copy of the DNA-binding high mobility group 1 protein sequence, and thus represents a novel HMG-box protein. This alternatively spliced variant of SP-100 has a unique expression and localization pattern that is distinct from the SP-100 full-length protein. The SP100 protein is covalently modified by the small ubiquitin-related protein SUMO-1. SP-100 contains a functional nuclear localization signal and an ND-targeting region, which overlaps with the SP-100 homodimerization domain. The homodimerization/ND-targeting region is considered a novel protein motif, termed HSR domain. SP-100 is also found to interact with Bright (B cell regulator of IgH transcription), which in lymphoid cells also interacts with LYSP100/SP140, the lymphoid-restricted homolog of SP100.

CHROMOSOMAL LOCATION

Genetic locus: SP100 (human) mapping to 2q37.1; Sp100 (mouse) mapping to 1 C5.

SOURCE

SP-100 (H-60) is a rabbit polyclonal antibody raised against amino acids 1-60 of SP-100 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

SP-100 (H-60) is recommended for detection of SP-100 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SP-100 siRNA (h): sc-41032, SP-100 siRNA (m): sc-41033, SP-100 shRNA Plasmid (h): sc-41032-SH, SP-100 shRNA Plasmid (m): sc-41033-SH, SP-100 shRNA (h) Lentiviral Particles: sc-41032-V and SP-100 shRNA (m) Lentiviral Particles: sc-41033-V.

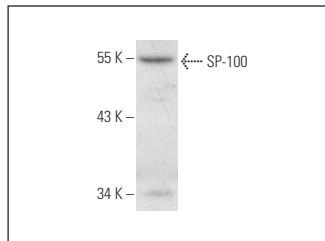
Molecular Weight of SP-100: 53 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, C32 nuclear extract: sc-2136 or c4 whole cell lysate: sc-364186.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SP-100 (H-60): sc-25568. Western blot analysis of SP-100 expression in c4 whole cell lysate.

SELECT PRODUCT CITATIONS

- Tavalai, N., et al. 2006. Evidence for a role of the cellular ND10 protein PML in mediating intrinsic immunity against human cytomegalovirus infections. *J. Virol.* 80: 8006-8018.
- Dimitropoulou, P., et al. 2010. Differential relocation and stability of PML-body components during productive human cytomegalovirus infection: detailed characterization by live-cell imaging. *Eur. J. Cell Biol.* 89: 757-768.
- Lin, Y., et al. 2011. Sp100 interacts with phage ϕ C31 integrase to inhibit its recombination activity. *Acta Biochim. Pol.* 58: 67-73.
- Sarkari, F., et al. 2011. The herpesvirus associated ubiquitin specific protease, USP7, is a negative regulator of PML proteins and PML nuclear bodies. *PLoS ONE* 6: e16598.
- Cosme, R.C., et al. 2011. Functional interaction of nuclear domain 10 and its components with cytomegalovirus after infections: cross-species host cells versus native cells. *PLoS ONE* 6: e19187.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **SP-100 (1G6): sc-293458**, our highly recommended monoclonal alternative to SP-100 (H-60).