

SPOP (C-14): sc-66649

BACKGROUND

SPOP (speckle-type POZ protein), also known as TEF2, HIB homolog 1 or Roadkill homolog 1, is a member of the Tdpoz family containing one N-terminal MATH (Meprin and TRAF Homology) domain and one C-terminal BTB/POZ domain. SPOP can exist as a homodimer and is expressed in a variety of tissues localizing to the nucleus. Through an interaction with CUL-3, SPOP is involved in ubiquitylation and protein degradation. SPOP specifically interacts with CUL-3 via its BTB/POZ domain and recruits substrates to the CUL-3-based ubiquitin ligase via its MATH domain. Substrates recruited by SPOP and targeted for ubiquitylation via the CUL-3/SPOP complex include PDX-1, Bmi-1, MacroH2A, PIPK II β and Daxx. These substrates are subsequently degraded by the proteasome. In addition, SPOP itself becomes ubiquitylated by the CUL-3-based ubiquitin ligase and is targeted for proteasomal degradation. SPOPL (speckle-type POZ protein-like), also known as HIB homolog 2 or Roadkill homolog 2, is a 392 amino acid nuclear protein that may be involved in ubiquitination and proteasomal degradation processes. SPOP and SPOPL share significant amino acid sequence homology.

REFERENCES

- Nagai, Y., et al. 1997. Identification of a novel nuclear speckle-type protein, SPOP. *FEBS Lett.* 418: 23-26.
- Zapata, J.M., et al. 2001. A diverse family of proteins containing tumor necrosis factor receptor-associated factor domains. *J. Biol. Chem.* 276: 24242-24252.
- Takahashi, I., et al. 2002. MacroH2A1.2 binds the nuclear protein SPOP. *Biochim. Biophys. Acta* 1591: 63-68.
- La, M., et al. 2004. Daxx-mediated transcriptional repression of MMP1 gene is reversed by SPOP. *Biochem. Biophys. Res. Commun.* 320: 760-765.
- Liu, A., et al. 2004. Identification of PCIF1, a POZ domain protein that inhibits PDX-1 (MODY4) transcriptional activity. *Mol. Cell. Biol.* 24: 4372-4383.
- Hernández-Muñoz, I., et al. 2005. Stable X chromosome inactivation involves the PRC1 Polycomb complex and requires histone MACROH2A1 and the CULLIN3/SPOP ubiquitin E3 ligase. *Proc. Natl. Acad. Sci. USA* 102: 7635-7640.

CHROMOSOMAL LOCATION

Genetic locus: SPOP (human) mapping to 17q21.33; Spop (mouse) mapping to 11 D.

SOURCE

SPOP (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SPOP of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-66649 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SPOP (C-14) is recommended for detection of SPOP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); may cross-react with SPOPL.

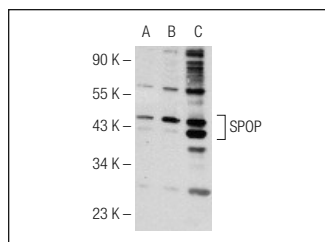
SPOP (C-14) is also recommended for detection of SPOP in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SPOP siRNA (h): sc-63056, SPOP siRNA (m): sc-63057, SPOP shRNA Plasmid (h): sc-63056-SH, SPOP shRNA Plasmid (m): sc-63057-SH, SPOP shRNA (h) Lentiviral Particles: sc-63056-V and SPOP shRNA (m) Lentiviral Particles: sc-63057-V.

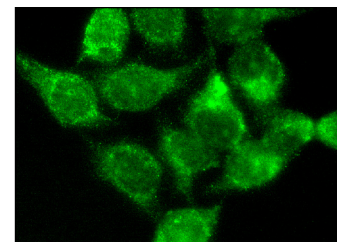
Molecular Weight of SPOP: 42 kDa.

Positive Controls: SPOP (h3): 293 Lysate: sc-129835, SK-N-MC cell lysate: sc-2237 or MCF7 nuclear extract: sc-2149.

DATA



SPOP (C-14): sc-66649. Western blot analysis of SPOP expression in non-transfected 293: sc-110760 (A), human SPOP transfected 293: sc-129835 (B) and SK-N-MC (C) whole cell lysates.



SPOP (C-14): sc-66649. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

- Kim, B., et al. 2011. Breast cancer metastasis suppressor 1 (BRMS1) is destabilized by the Cul3-SPOP E3 ubiquitin ligase complex. *Biochem. Biophys. Res. Commun.* 415: 720-726.

STORAGE

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

RESEARCH USE

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



Try **SPOP (B-8): sc-377206**, our highly recommended monoclonal alternative to SPOP (C-14). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **SPOP (B-8): sc-377206**.