

SSB-2 (W-12): sc-241690

BACKGROUND

Members of the suppressor of cytokine signaling (SOCS) family of proteins contain C-terminal regions of homology called the SOCS box, which serves to couple SOCS proteins and their binding partners with the Elongin B and C complex, thereby mediating protein degradation. Several other families of proteins also contain SOCS boxes, but differ from the SOCS proteins in the type of domain they contain upstream of the SOCS box. SSB-2 (Spry/ryanodine (SPRY) receptor domain-containing SOCS box protein 2), also known as GGRCC9 (gene-rich cluster protein C9), SPSB2 or MGC2519, is a cytoplasmic protein belonging to the SPSB family of proteins that contain a central SPRY domain and a C-terminal SOCS box. The SPRY domain is believed to be a protein-protein interaction motif. Members of the SPSB family are capable of interacting with Met (a receptor for hepatocyte growth factors (HGFs)), and SSB-1 is known to promote HGF signaling. SSB-1, SSB-2 and SSB-4 are also able to interact with PAR4 (prostate apoptosis response protein 4). Mutations in the genes encoding SPSB proteins are associated with several human diseases.

REFERENCES

- Hilton, D.J., Richardson, R.T., Alexander, W.S., Viney, E.M., Willson, T.A., Sprigg, N.S., Starr, R., Nicholson, S.E., Metcalf, D. and Nicola, N.A. 1998. Twenty proteins containing a C-terminal SOCS box form five structural classes. *Proc. Natl. Acad. Sci. USA* 95: 114-119.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611658. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Wang, D., Li, Z., Messing, E.M. and Wu, G. 2005. The SPRY domain-containing SOCS box protein 1 (SSB-1) interacts with Met and enhances the hepatocyte growth factor-induced Erk-Elk-1-serum response element pathway. *J. Biol. Chem.* 280: 16393-16401.
- Yao, S., Masters, S.L., Zhang, J.G., Palmer, K.R., Babon, J.J., Nicola, N.A., Nicholson, S.E. and Norton, R.S. 2005. Backbone 1H, 13C and 15N assignments of the 25 kDa SPRY domain-containing SOCS box protein 2 (SSB-2). *J. Biomol. NMR* 31: 69-70.
- Masters, S.L., Palmer, K.R., Stevenson, W.S., Metcalf, D., Viney, E.M., Sprigg, N.S., Alexander, W.S., Nicola, N.A. and Nicholson, S.E. 2005. Genetic deletion of murine SPRY domain-containing SOCS box protein 2 (SSB-2) results in very mild thrombocytopenia. *Mol. Cell. Biol.* 25: 5639-5647.
- Woo, J.S., Suh, H.Y., Park, S.Y. and Oh, B.H. 2006. Structural basis for protein recognition by B30.2/SPRY domains. *Mol. Cell* 24: 967-976.
- Masters, S.L., Yao, S., Willson, T.A., Zhang, J.G., Palmer, K.R., Smith, B.J., Babon, J.J., Nicola, N.A., Norton, R.S. and Nicholson, S.E. 2006. The SPRY domain of SSB-2 adopts a novel fold that presents conserved PAR-4-binding residues. *Nat. Struct. Mol. Biol.* 13: 77-84.

CHROMOSOMAL LOCATION

Genetic locus: SPSB2 (human) mapping to 12p13.31; Spsb2 (mouse) mapping to 6 F2.

SOURCE

SSB-2 (W-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SSB-2 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.

Blocking peptide available for competition studies, sc-241690 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SSB-2 (W-12) is recommended for detection of SSB-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with SSB-1, SSB-3 or SSB-4.

SSB-2 (W-12) is also recommended for detection of SSB-2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for SSB-2 siRNA (h): sc-96168, SSB-2 siRNA (m): sc-153837, SSB-2 shRNA Plasmid (h): sc-96168-SH, SSB-2 shRNA Plasmid (m): sc-153837-SH, SSB-2 shRNA (h) Lentiviral Particles: sc-96168-V and SSB-2 shRNA (m) Lentiviral Particles: sc-153837-V.

Molecular Weight of SSB-2: 25 kDa.

Positive Controls: A549 cell lysate: sc-2413.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 **SSB-2 (32-K): sc-100863**, our highly recommended monoclonal alternative to SSB-2 (W-12).