# SSB-1 (G-12): sc-137798



The Power to Question

### **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 BC 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-1 (SPRY domain-containing SOCS box protein 1), also known as SPSB1, is a 273 amino acid protein belonging to the SPSB family. SSB-1 localizes to cytoplasm, and contains one B30.2/SPRY domain and one SOCS box domain. Functioning as a substrate recognition component of the Elongin BC complex, SSB-1 plays a role in the ubiquitination and subsequent proteasomal degradation of target proteins.

# **REFERENCES**

- Hilton, D.J., et al. 1998. Twenty proteins containing a C-terminal SOCS box form five structural classes. Proc. Natl. Acad. Sci. USA 95: 114-119.
- Wang, D., et al. 2005. The SPRY domain-containing SOCS box protein 1 (SSB-1) interacts with MET and enhances the hepatocyte growth factorinduced Erk-Elk-1-serum response element pathway. J. Biol. Chem. 280: 16393-16401.
- Masters, S.L., et al. 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.
- 4. Woo, J.S., et al. 2006. Structural basis for protein recognition by B30.2/ SPRY domains. Mol. Cell 24: 967-976.
- Masters, S.L., et al. 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.
- Li, J.Z., et al. 2009. Cloning and characterization of the SSB-1 and SSB-4 genes expressed in zebrafish gonads. Biochem. Genet. 47: 179-190.
- Kleiber, M.L. and Singh, S.M. 2009. Divergence of the vertebrate sp1A/ ryanodine receptor domain and SOCS box-containing (Spsb) gene family and its expression and regulation within the mouse brain. Genomics 93: 358-366.

# **CHROMOSOMAL LOCATION**

Genetic locus: SPSB1 (human) mapping to 1p36.22; Spsb1 (mouse) mapping to 4 E2.

# SOURCE

SSB-1 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SSB-1 of human origin.

## **PRODUCT**

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137798 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

SSB-1 (G-12) is recommended for detection of SSB-1 of mouse, rat 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); non cross-reactive with SSB-2, SSB-3 or SSB-4.

SSB-1 (G-12) is also recommended for detection of SSB-1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for SSB-1 siRNA (h): sc-88214, SSB-1 siRNA (m): sc-153836, SSB-1 shRNA Plasmid (h): sc-88214-SH, SSB-1 shRNA Plasmid (m): sc-153836-SH, SSB-1 shRNA (h) Lentiviral Particles: sc-88214-V and SSB-1 shRNA (m) Lentiviral Particles: sc-153836-V.

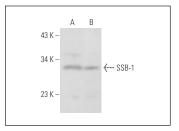
Molecular Weight of SSB-1: 31 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

#### DATA



SSB-1 (G-12): sc-137798. Western blot analysis of SSB-1 expression in A549 (A) and HeLa (B) whole cell lysates.

#### **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

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