

# Sam 68 (C-15): sc-46627

## BACKGROUND

Sam 68 is phosphorylated on tyrosine and functions as a substrate for Src family tyrosine kinases during mitosis. Sam 68 also associates with several SH2 and SH3 domain-containing signaling proteins, such as GRB2 and PLC  $\gamma$ 1. Originally cloned as Ras GAP-associated p62, further investigations have shown that Sam 68 and Ras GAP-associated p62 are not antigenically related, nor are they encoded by the same gene. Like Sam 68, the Sam 68-like mammalian proteins, SLM-1 and SLM-2, demonstrate RNA binding activity. Also like Sam 68, SLM-1 is tyrosine phosphorylated and functions as an adapter protein for signaling molecules, including GRB2, PLC  $\gamma$ 1, Fyn and RasGAP. SLM-2 is not tyrosine phosphorylated, nor does it appear to associate with GRB2, PLC  $\gamma$ 1, Fyn or RasGAP, indicating that SLM-2 may not be an adapter protein for these proteins.

## REFERENCES

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3. Richard, S., Yu, D., Blumer, K.J., Hausladen, D., Olszowy, M.W., Connelly, P.A. and Shaw, A.S. 1995. Association of p62, a multifunctional SH2- and SH3-domain-binding protein, with Src family tyrosine kinases, GRB2, and phospholipase C  $\gamma$ 1. *Mol. Cell. Biol.* 15: 186-197.
4. Lock, P., Fumagalli, S., Polakis, P., McCormick, F. and Courtneidge, S.A. 1996. The human p62 cDNA encodes Sam 68 and not the RasGAP-associated p62 protein. *Cell* 84: 23-24.
5. Guitard, E., Barlat, I., Maurier, F., Schweighoffer, F. and Tocque, B. 1998. Sam 68 is a Ras-GAP-associated protein in mitosis. *Biochem. Biophys. Res. Commun.* 245: 562-566.
6. Di Fruscio, M., Chen, T. and Richard, S. 1999. Characterization of Sam 68-like mammalian proteins SLM-1 and SLM-2: SLM-1 is a Src substrate during mitosis. *Proc. Natl. Acad. Sci. USA* 96: 2710-2715.

## CHROMOSOMAL LOCATION

Genetic locus: KHDRBS1 (human) mapping to 1p35.1; Khdrbs1 (mouse) mapping to 4 D2.2.

## SOURCE

Sam 68 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Sam 68 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-46627 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Sam 68 (C-15) is recommended for detection of Sam 68 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Sam 68 (C-15) is also recommended for detection of Sam 68 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Sam 68 siRNA (h): sc-29476, Sam 68 siRNA (m): sc-36451, Sam 68 shRNA Plasmid (h): sc-29476-SH, Sam 68 shRNA Plasmid (m): sc-36451-SH, Sam 68 shRNA (h) Lentiviral Particles: sc-29476-V and Sam 68 shRNA (m) Lentiviral Particles: sc-36451-V.

Molecular Weight of Sam 68: 68 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HeLa whole cell lysate: sc-2200 or A-431 nuclear extract: sc-2122.

## 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **Sam 68 (H-4): sc-514468** or **Sam 68 (C-7): sc-514404**, our highly recommended monoclonal alternatives to Sam 68 (C-15).