

Sam 68 (15): sc-136062

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 γ 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 γ 1, Fyn and RasGAP. SLM-2 is not tyrosine phosphorylated, nor does it appear to associate with GRB2, PLC γ 1, Fyn or Ras GAP, indicating that SLM-2 may not be an adapter protein for these proteins.

REFERENCES

1. Fumagalli, S., Totty, N.F., Hsuan, J.J. and Courtneidge, S.A. 1994. A target for Src in mitosis. *Nature* 368: 871-874.
2. Maa, M.C., Leu, T.H., Trandel, B.J., Chang, J.H. and Parsons, S.J. 1994. A protein that is highly related to GTPase-activating protein-associated p62 complexes with phospholipase C γ . *Mol. Cell. Biol.* 14: 5466-5473.
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 γ 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 RasGAP-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 (15) is a mouse monoclonal antibody raised against amino acids 91-272 of Sam 68 of human origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

STORAGE

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

APPLICATIONS

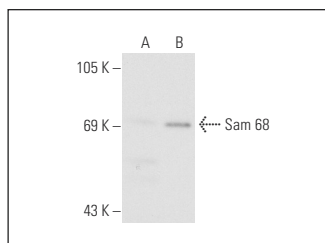
Sam 68 (15) is recommended for detection of Sam 68 of mouse, rat, human, bovine and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

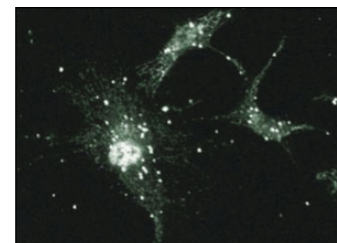
Molecular Weight of Sam 68: 68 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, NIH/3T3 whole cell lysate: sc-2210 or A-431 nuclear extract: sc-2122.

DATA



Sam 68 (15): sc-136062. Western blot analysis of Sam 68 expression in non-transfected: sc-117752 (A) and human Sam 68 transfected: sc-175256 (B) 293T whole cell lysates.



Sam 68 (15): sc-136062. Immunofluorescence staining of CPAE cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Klein, M.E., Younts, T.J., Cobo, C.F., Buxbaum, A.R., Aow, J., Richard, S., Erdjument-Bromage, H., Malinow, R., Neubert, T.A., Singer, R.H., Castillo, P.E. and Jordan, B.A. 2019. Sam 68 enables metabotropic glutamate receptor-dependent LTD in distal dendritic regions of CA1 hippocampal neurons. *Cell Rep.* 29: 1789-1799.e6.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.