SANTA CRUZ BIOTECHNOLOGY, INC.

Sam 68 (H-4): sc-514468

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Sam 68 is a protein that 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 γ1. 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 γ1, Fyn and Ras GAP. SLM-2 is not tyrosine phosphorylated, nor does it appear to associate with GRB2, PLC γ1, Fyn or Ras GAP, indicating that SLM-2 may not be an adapter protein for these proteins.

REFERENCES

1. Fumagalli, S., et al. 1994. A target for Src in mitosis. Nature 368: 871-874.
2. Maa, M.C., et al. 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., et al. 1995. Association of p62, a multifunctional SH2- and SH3-domain-binding protein, with Src family tyrosine kinases, GRB2, and phospholipase C γ1. Mol. Cell. Biol. 15: 186-197.
4. Lock, P., et al. 1996. The human p62 cDNA encodes Sam 68 and not the Ras GAP-associated p62 protein. Cell 84: 23-24.

CHROMOSOMAL LOCATION

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

SOURCE

Sam 68 (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 416-443 at the C-terminus of Sam 68 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Sam 68 (H-4) is available conjugated to agarose (sc-514468 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514468 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514468 PE), fluorescein (sc-514468 FITC), Alexa Fluor® 488 (sc-514468 AF488), Alexa Fluor® 546 (sc-514468 AF546), Alexa Fluor® 594 (sc-514468 AF594) or Alexa Fluor® 647 (sc-514468 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514468 AF680) or Alexa Fluor® 790 (sc-514468 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514468 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

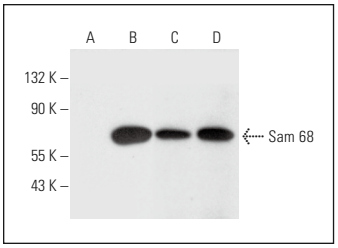
Sam 68 (H-4) is recommended for detection of Sam 68 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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: Raji whole cell lysate: sc-364236, Jurkat whole cell lysate: sc-2204 or Sam 68 (m): 293T Lysate: sc-125954.

DATA



Sam 68 (H-4): sc-514468. Western blot analysis of Sam 68 expression in non-transfected 293T: sc-117752 (**A**), mouse Sam 68 transfected 293T: sc-125954 (**B**), Jurkat (**C**) and Raji (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Penke, L.R., et al. 2018. FOXM1 is a critical driver of lung fibroblast activation and fibrogenesis. J. Clin. Invest. 128: 2389-2405.
2. He, H., et al. 2019. Endogenous interaction profiling identifies DDX5 as an oncogenic coactivator of transcription factor Fra-1. Oncogene 38: 5725-5738.
3. Turdo, A., et al. 2022. Effective targeting of breast cancer stem cells by combined inhibition of Sam 68 and Rad51. Oncogene 41: 2196-2209.
4. Vilariño-García, T., et al. 2022. Decreased expression of Sam 68 is associated with Insulin resistance in granulosa cells from PCOS patients. Cells 11: 2821.

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.