

Sos 1 (A-9): sc-17793

BACKGROUND

The superfamily of GTP-binding proteins, of which Ras proteins are prototypes, has been implicated in a broad range of biological activities. Studies have identified a family of guanine nucleotide-releasing factors (GRFs) that activate Ras in mammalian cells and an "adapter" protein (Sem 5/GRB2) that appears to mediate the interaction of GRFs with activated receptor molecules. Ras-GRF p140 promotes nucleotide exchange on Ras p21s but not on other members of the Ras gene superfamily. In addition, three mammalian homologs of the *Drosophila* Ras-GRF, son of sevenless (Sos), have been described. These include two from mouse, m Sos 1 and m Sos 2, and one from human, h Sos. Vav p95 has been reported to function as a GRF in activation of Ras by the T cell receptor and has been reported to have a domain similar to that of Dbl p115, which is a GRF specific for CDC42Hs. Subsequent to activation, Ras appears to interact with Raf, thereby activating the MAP kinase phosphorylation pathway.

CHROMOSOMAL LOCATION

Genetic locus: SOS1 (human) mapping to 2p22.1; Sos1 (mouse) mapping to 17 E3.

SOURCE

Sos 1 (A-9) is a mouse monoclonal antibody raised against amino acids 1057-1178 mapping near the C-terminus of Sos 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Sos 1 (A-9) is available conjugated to agarose (sc-17793 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17793 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17793 PE), fluorescein (sc-17793 FITC), Alexa Fluor® 488 (sc-17793 AF488), Alexa Fluor® 546 (sc-17793 AF546), Alexa Fluor® 594 (sc-17793 AF594) or Alexa Fluor® 647 (sc-17793 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17793 AF680) or Alexa Fluor® 790 (sc-17793 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Sos 1 (A-9) is recommended for detection of Sos 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:1,000), 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).

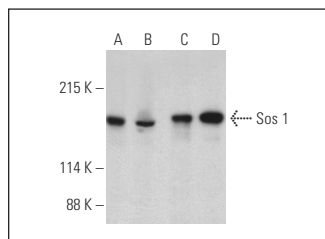
Suitable for use as control antibody for Sos 1 siRNA (h): sc-29486, Sos 1 siRNA (m): sc-36524, Sos 1 shRNA Plasmid (h): sc-29486-SH, Sos 1 shRNA Plasmid (m): sc-36524-SH, Sos 1 shRNA (h) Lentiviral Particles: sc-29486-V and Sos 1 shRNA (m) Lentiviral Particles: sc-36524-V.

Molecular Weight of Sos 1: 170 kDa.

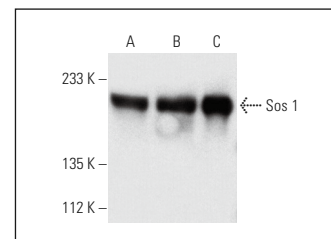
STORAGE

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

DATA



Sos 1 (A-9): sc-17793. Western blot analysis of Sos 1 expression in K-562 (A), Daudi (B), NIH/3T3 (C) and KNRK (D) whole cell lysates. Detection reagent used: m-IgG_{2b} BP-HRP: sc-542741.



Sos 1 (A-9): sc-17793. Western blot analysis of Sos 1 expression in K-562 (A), NIH/3T3 (B) and KNRK (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Martin, J.C., et al. 2010. Disabled-2 downregulation promotes epithelial-to-mesenchymal transition. *Br. J. Cancer* 103: 1716-1723.
- Nakatani, K., et al. 2019. KRAS and EGFR amplifications mediate resistance to rociletinib and osimertinib in acquired afatinib-resistant NSCLC harboring exon 19 deletion/T790M in EGFR. *Mol. Cancer Ther.* 18: 112-126.
- Li, C.P., et al. 2020. Cationic pillar[6]arene induces cell apoptosis by inhibiting protein tyrosine phosphorylation via host-guest recognition. *Int. J. Mol. Sci.* 21: 4979.
- Liu, S.S., et al. 2021. The chemokine CCL1 triggers an AMFR-SPRY1 pathway that promotes differentiation of lung fibroblasts into myofibroblasts and drives pulmonary fibrosis. *Immunity* 54: 2042-2056.e8.
- Liao, Y., et al. 2023. 5-HT modulates the properties of dendritic cells to interfere with the development of type 1 regulating T cells. *Mol. Immunol.* 160: 161-167.
- Basilotta, R., et al. 2024. Benzyl isothiocyanate suppresses development of thyroid carcinoma by regulating both autophagy and apoptosis pathway. *iScience* 27: 110796.
- Mannino, D., et al. 2025. KRAS-SOS-1 inhibition as new pharmacological target to counteract anaplastic thyroid carcinoma (ATC). *Int. J. Mol. Sci.* 26: 2579.

RESEARCH USE

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

PROTOCOLS

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