

Sos 1 (H-122): sc-10803

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. Sub-sequent 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 (H-122) is a rabbit polyclonal 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 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Sos 1 (H-122) is recommended for detection of Sos 1 p170 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), 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).

Sos 1 (H-122) is also recommended for detection of Sos 1 p170 in additional species, including equine, canine, bovine and porcine.

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.

Positive Controls: Sos 1 (h): 293T Lysate: sc-129810, K-562 whole cell lysate: sc-2203 or 3611-RF whole cell lysate: sc-2215.

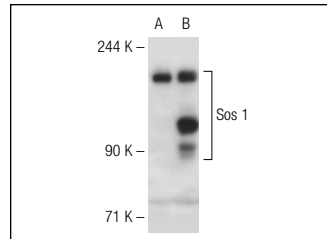
STORAGE

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

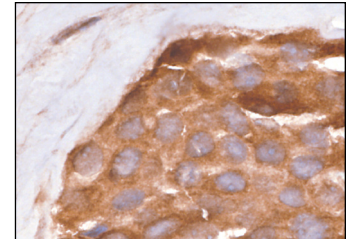
RESEARCH USE

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

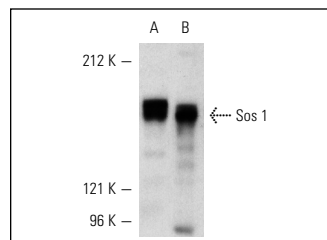
DATA



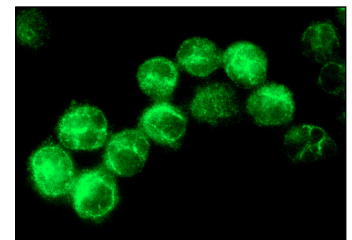
Sos 1 (H-122): sc-10803. Western blot analysis of Sos 1 expression in non-transfected: sc-117752 (A) and human Sos 1 transfected: sc-129810 (B) 293T whole cell lysates.



Sos 1 (H-122): sc-10803. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing cytoplasmic staining.



Sos 1 (H-122): sc-10803. Western blot analysis of Sos 1 expression in K-562 (A) and 3611-RF (B) whole cell lysates.



Sos 1 (H-122): sc-10803. Immunofluorescence staining of methanol-fixed K-562 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Wang, Y., et al. 2004. Entire mitogen activated protein kinase (MAPK) pathway is present in preimplantation mouse embryos. *Dev. Dyn.* 231: 72-87.
- Liu, J., et al. 2004. Serine-threonine kinases and transcription factors active in signal transduction are detected at high levels of phosphorylation during mitosis in preimplantation embryos and trophoblast stem cells. *Reproduction* 128: 643-654.
- Zuo, L., et al. 2005. Caveolin-1 is essential for activation of Rac1 and NAD(P)H oxidase after angiotensin II type 1 receptor stimulation in vascular smooth muscle cells: role in redox signaling and vascular hypertrophy. *Arterioscler. Thromb. Vasc. Biol.* 25: 1824-1830.
- Xie, Y., et al. 2005. Six post-implantation lethal knockouts of genes for lipophilic MAPK pathway proteins are expressed in preimplantation mouse embryos and trophoblast stem cells. *Mol. Reprod. Dev.* 71: 1-11.


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Try **Sos 1 (A-9): sc-17793** or **Sos 1 (G-12): sc-376789**, our highly recommended monoclonal alternatives to Sos 1 (H-122).