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Product Information

Anti-Sos-1
produced in rabbit, IgG fraction of antiserum

Catalog Number **S2937**

Product Description

Anti-Sos-1 is produced in rabbit using as immunogen a synthetic peptide corresponding to the C-terminus region of Sos-1 of human origin (amino acids 1315-1333) with N-terminal added lysine, conjugated to KLH. This sequence is identical in mouse. Whole antiserum is purified to provide an IgG fraction of antiserum

Anti-Sos-1 specifically recognizes Sos-1 by immunoblotting (170 kDa). An additional band of lower molecular weight may be detected in some cell line extracts. Staining of Sos-1 by immunoblotting is specifically inhibited with the immunizing peptide. Also, the antibody may be used for the detection of Sos-1 by immunocytochemistry. The antibody reacts with Sos-1 of human, rat and dog origin.

RAS genes encode membrane-bound guanine-nucleotide-binding cell signaling proteins that are activated in response to various extracellular stimuli by binding GTP. Subsequent hydrolysis of the bound GTP to GDP and phosphate inactivates signaling by these proteins. GTP binding is catalyzed by guanine nucleotide exchange factors that induce GDP release thereby enabling fresh GTP binding. GTP hydrolysis can be accelerated by GTP-ase activating proteins.[1]

In *Drosophila*, the protein encoded by the “son of sevenless” gene Sos is an exchange factor for RAS. Two mammalian (mouse and human) homologs of the *Drosophila* Sos have been described.[2,3] Both mouse homologs show overall amino acid identity of about 45% with the *Drosophila* Sos. Mouse Sos-1 and Sos-2 are approximately 70 % identical.

Mammalian Sos proteins are located in the inner plasma membrane. RAS activation involves formation of molecular complexes of autophosphorylated growth factor receptors with the SH2 and SH3 domain-containing adaptor protein GRB2 and Sos proteins.[4,5,6] Sos-1 can associate also with the GRAP adaptor protein[7] and it is also capable of forming complexes that exhibit Rac-specific guanine nucleotide exchange factor activity.[8,9]

Reagent

Supplied as the IgG fraction of antiserum in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Protein concentration is 10-15 mg/ml.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a minimum working antibody dilution of 1:4,000 is determined using whole extracts of A431 (human epidermoid carcinoma) and PC 12 (rat pheochromocytoma) cell lines.

Indirect Immunofluorescent Staining: a minimum working dilution of 1:500 is determined using cultured canine MDCK cells.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilution by titration test.

References

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