SANTA CRUZ BIOTECHNOLOGY, INC.

SHIP-1 (N-1): sc-6244

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The major translational product of the v-Fms oncogene, originally isolated from the McDonough strain of feline sarcoma virus, has been identified as a glycoprotein with intrinsic tyrosine kinase activity. The v-Fms human cellular homolog, c-Fms, has been molecularly cloned and mapped to band q34 on chromosome 5, and identified as the receptor for hematopoietic ligand, CSF-1. Ligand-induced activation of the intrinsic CSF-1R protein tyrosine kinase triggers its interaction with cytoplasmic effector molecules. One such effector molecule, SHIP-1 p145 (SH2-containing-inositol phosphatase), associates with activated Fms. SHIP-1 contains two phosphotyrosine-binding domains (PTB), a unique amino-terminal SH2 domain, a proline-rich region and two highly conserved motifs found among inositol phosphate 5-phosphatases. SHIP-1 displays both phosphatidylinositol 3,4,5-triphosphate and inositol 1,3,4,5-tetrakisphosphate polyphosphate 5-phosphatase activity. Evidence suggests that SHIP-1 may modulate Ras signaling in addition to inositol signaling pathways.

CHROMOSOMAL LOCATION

Genetic locus: INPP5D (human) mapping to 2q37.1; Inpp5d (mouse) mapping to 1 D.

SOURCE

SHIP-1 (N-1) is a rabbit polyclonal antibody raised against amino acids 1-105 mapping at the N-terminus of SHIP-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SHIP-1 (N-1) is recommended for detection of SHIP-1 p145 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).

Suitable for use as control antibody for SHIP-1 siRNA (h): sc-36490, SHIP-1 siRNA (m): sc-36491, SHIP-1 shRNA Plasmid (h): sc-36490-SH, SHIP-1 shRNA Plasmid (m): sc-36491-SH, SHIP-1 shRNA (h) Lentiviral Particles: sc-36490-V and SHIP-1 shRNA (m) Lentiviral Particles: sc-36491-V.

Molecular Weight of SHIP-1: 145 kDa.

Positive Controls: P815 whole cell lysate: sc-364789, MCP-5 whole cell lysate or THP-1 cell lysate: sc-2238.

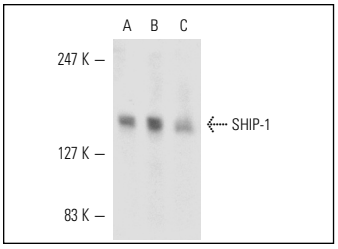
STORAGE

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

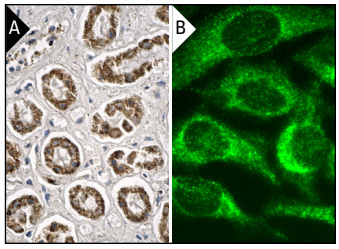
RESEARCH USE

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

DATA



SHIP-1 (N-1): sc-6244. Western blot analysis of SHIP-1 expression in THP-1 (**A**), P815 (**B**) and MCP-5 (**C**) whole cell lysates.



SHIP-1 (N-1): sc-6244. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (**A**). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Poe, J.C., et al. 2000. CD22 forms a quaternary complex with SHIP, GRB2, and Shc. J. Biol. Chem. 275: 17420-17427.
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3. Campbell, K.S., et al. 2004. NKp44 triggers NK cell activation through DAP12 association that is not influenced by a putative cytoplasmic inhibitory sequence. J. Immunol. 172: 899-906.
4. Griswold, I.J., et al. 2006. Kinase domain mutants of Bcr-Abl exhibit altered transformation potency, kinase activity, and substrate utilization, irrespective of sensitivity to imatinib. Mol. Cell. Biol. 26: 6082-6093.
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6. Chemnitz, J.M., et al. 2006. B and T lymphocyte attenuator-mediated signal transduction provides a potent inhibitory signal to primary human CD4 T cells that can be initiated by multiple phosphotyrosine motifs. J. Immunol. 176: 6603-6614.
7. Mukherjee, O., et al. 2011. The SH2-domain of SHIP1 interacts with the SHIP1 C-terminus: impact on SHIP1/Ig-α interaction. Biochim. Biophys. Acta 1823: 206-214.
8. Harris, S.J., et al. 2011. Evidence that the lipid phosphatase SHIP-1 regulates T lymphocyte morphology and motility. J. Immunol. 186: 4936-4945.