SANTA CRUZ BIOTECHNOLOGY, INC.

SHIP-1 (M-14): sc-1964

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 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 (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SHIP 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.

Blocking peptide available for competition studies, sc-1964 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SHIP-1 (M-14) 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: BYDP whole cell lysate: sc-364368, THP-1 cell lysate: sc-2238 or CTLL-2 cell lysate: sc-2242.

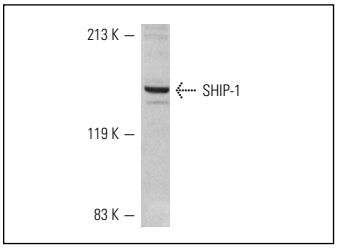
STORAGE

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

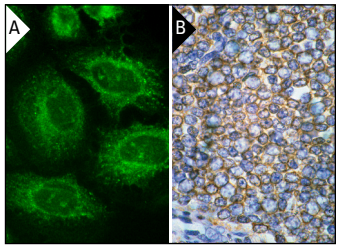
RESEARCH USE

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

DATA



SHIP-1 (M-14): sc-1964. Western blot analysis of SHIP-1 expression in BYDP whole cell lysate.



SHIP-1 (M-14): sc-1964. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal human spleen showing membrane localization (**B**).

SELECT PRODUCT CITATIONS

1. Mason, J.M., et al. 2000. The SH2 inositol 5-phosphatase ship1 is recruited in an SH2-dependent manner to the erythropoietin receptor. J. Biol. Chem. 275: 4398-4406.
2. Nishigaki, K., et al. 2000. Erythroid cells rendered erythropoietin independent by infection with Friend spleen focus-forming virus show constitutive activation of phosphatidylinositol 3-kinase and Akt kinase: involvement of Insulin receptor substrate-related adapter proteins. J. Virol. 74: 3037-3045.
3. Gembitsky, D.S. 2004. A prototype antibody microarray platform to monitor changes in protein tyrosine phosphorylation. Mol. Cell. Proteomics 3: 1102-1118.
4. Tzeng, S., et al. 2005. The B cell inhibitory Fc receptor triggers apoptosis by a novel c-Abl family kinase-dependent pathway. J. Biol. Chem. 280: 35247-35254.
5. Bertelli, D.F., et al. 2006. Phosphoinositide-specific inositol polyphosphate 5-phosphatase IV inhibits inositide trisphosphate accumulation in hypothalamus and regulates food intake and body weight. Endocrinology 147: 5385-5399.
6. O'Connell, R.M., et al. 2009. Inositol phosphatase SHIP1 is a primary target of miR-155. Proc. Natl. Acad. Sci. USA 106: 7113-7118.
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.

MONOS Satisfaction Guaranteed

Try **SHIP-1 (P1C1): sc-8425** or **SHIP-1 (F-5): sc-271426**, our highly recommended monoclonal alternatives to SHIP-1 (M-14). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SHIP-1 (P1C1): sc-8425**.