

# SHIP-1 (G-11): sc-271203

## 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 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.

## REFERENCES

- Groffen, J., et al. 1983. Chromosomal localization of the human c-Fms oncogene. *Nucleic Acids Res.* 11: 6331-6339.
- Sherr, C.J., et al. 1985. The c-Fms proto-oncogene product is related to the receptor for the mononuclear phagocyte growth factor, CSF-1. *Cell* 41: 665-676.
- Roussel, M.F., et al. 1987. Transforming potential of c-Fms proto-oncogene (CSF-1 receptor). *Nature* 325: 549-552.
- Sherr, C.J., et al. 1991. The colony-stimulating factor 1 receptor (Fms): signal transduction and hematopoietic cell transformation. In *The Origins of Human Cancer*. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York.
- Matsushime, H., et al. 1991. Colony-stimulating factor 1 regulates novel cyclins during the G<sub>1</sub> phase of the cell cycle. *Cell* 65: 701-713.
- Lioubin, M.N., et al. 1996. p150<sup>Ship</sup>, a signal transduction molecule with inositol polyphosphate-5-phosphatase activity. *Genes Dev.* 10: 1084-1095.
- Damen, J.E., et al. 1996. The 145 kDa protein induced to associate with Shc by multiple cytokines is an inositol tetrakisphosphate and phosphatidylinositol 3,4,5-triphosphate 5-phosphatase. *Proc. Natl. Acad. Sci. USA* 93: 1689-1693.

## CHROMOSOMAL LOCATION

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

## SOURCE

SHIP-1 (G-11) is a mouse monoclonal 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<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

SHIP-1 (G-11) is recommended for detection of SHIP-1 p145 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) 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.

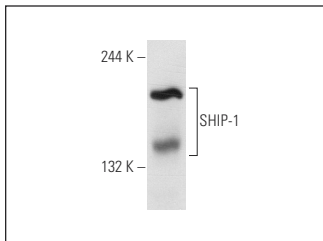
Molecular Weight of SHIP-1: 145 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242, THP-1 cell lysate: sc-2238 or BYDP whole cell lysate: sc-364368.

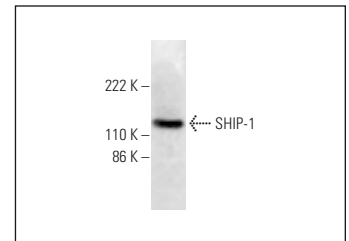
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



SHIP-1 (G-11): sc-271203. Western blot analysis of SHIP-1 expression in THP-1 whole cell lysate.



SHIP-1 (G-11): sc-271203. Western blot analysis of SHIP-1 expression in BYDP whole cell lysate.

## 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.



See **SHIP-1 (P1C1): sc-8425** for SHIP-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.