SANTA CRUZ BIOTECHNOLOGY, INC.

SHIP-1 (D-11): sc-514205

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.

REFERENCES

1. Groffen, J., et al. 1983. Chromosomal localization of the human c-Fms oncogene. Nucleic Acids Res. 11: 6331-6341.
2. 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.
3. Roussel, M.F., et al. 1987. Transforming potential of c-Fms proto-oncogene (CSF-1 receptor). Nature 325: 549-552.
4. 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.
5. Matsushime, H., et al. 1991. Colony-stimulating factor 1 regulates novel cyclins during the G_1 phase of the cell cycle. Cell 65: 701-713.

CHROMOSOMAL LOCATION

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

SOURCE

SHIP-1 (D-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 5-27 at the N-terminus of SHIP-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514205 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

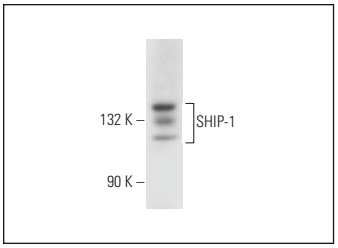
SHIP-1 (D-11) is recommended for detection of SHIP-1 p145 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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.

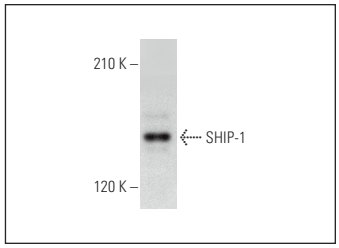
Molecular Weight of SHIP-1: 145 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211 or BYDP whole cell lysate: sc-364368.

DATA



SHIP-1 (D-11): sc-514205. Western blot analysis of SHIP-1 expression in RAW 264.7 whole cell lysate.



SHIP-1 (D-11): sc-514205. Western blot analysis of SHIP-1 expression in BYDP whole cell lysate.

SELECT PRODUCT CITATIONS

1. Fernandes, S., et al. 2018. SHIP1 deficiency in inflammatory bowel disease is associated with severe Crohn's disease and peripheral T cell reduction. Front. Immunol. 9: 1100.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

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.