SANTA CRUZ BIOTECHNOLOGY, INC.

SHIP-1 (E-8): sc-393361

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.
6. Lioubin, M.N., et al. 1996. $p150^{Ship}$, a signal transduction molecule with inositol polyphosphate-5-phosphatase activity. Genes Dev. 10: 1084-1095.

CHROMOSOMAL LOCATION

Genetic locus: Inpp5d (mouse) mapping to 1 D.

SOURCE

SHIP-1 (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1161-1188 at the C-terminus of SHIP 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-393361 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

SHIP-1 (E-8) is recommended for detection of SHIP-1 p145 of mouse 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 (m): sc-36491, SHIP-1 shRNA Plasmid (m): sc-36491-SH and SHIP-1 shRNA (m) Lentiviral Particles: sc-36491-V.

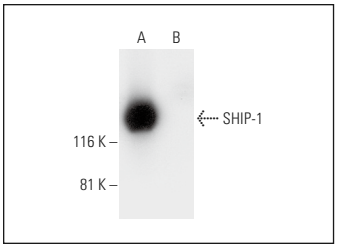
Molecular Weight of SHIP-1: 145 kDa.

Positive Controls: BYDP whole cell lysate: sc-364368, M1 whole cell lysate: sc-364782 or BW5147 cell lysate: sc-3800.

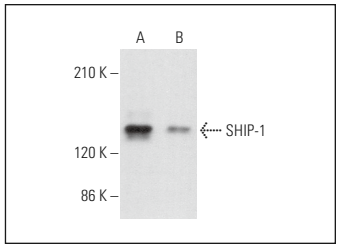
RECOMMENDED SUPPORT REAGENTS

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 (E-8): sc-393361. Western blot analysis of SHIP-1 expression in BYDP (**A**) and THP-1 (**B**) whole cell lysates. Note lack of reactivity with human SHIP-1 in lane **B**.



SHIP-1 (E-8): sc-393361. Western blot analysis of SHIP-1 expression in M1 (**A**) and BW5147 (**B**) whole cell lysates.

STORAGE

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

CONJUGATES

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