SANTA CRUZ BIOTECHNOLOGY, INC.

SHIP-1 (P1C1): sc-8425

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 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 (P1C1) is a mouse monoclonal antibody raised against amino acids 866-1020 mapping at the C-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.

SHIP-1 (P1C1) is available conjugated to agarose (sc-8425 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8425 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8425 PE), fluorescein (sc-8425 FITC), Alexa Fluor® 488 (sc-8425 AF488), Alexa Fluor® 546 (sc-8425 AF546), Alexa Fluor® 594 (sc-8425 AF594) or Alexa Fluor® 647 (sc-8425 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8425 AF680) or Alexa Fluor® 790 (sc-8425 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SHIP-1 (P1C1) 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).

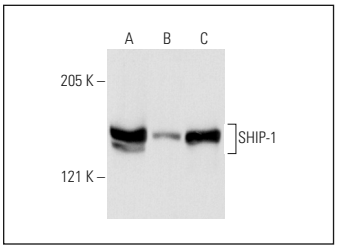
Suitable for use as control antibody for SHIP-1 siRNA (h): sc-36490, SHIP-1 siRNA (m): sc-36491, SHIP-1 shRNA Plasmid (h): sc-36490-SH, SHIP-1 shRNA Plasmid (m): sc-36491-SH, SHIP-1 shRNA (h) Lentiviral Particles: sc-36490-V and SHIP-1 shRNA (m) Lentiviral Particles: sc-36491-V.

Molecular Weight of SHIP-1: 145 kDa.

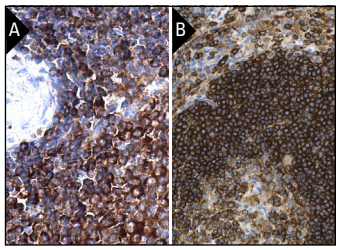
STORAGE

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

DATA



SHIP-1 (P1C1): sc-8425. Western blot analysis of SHIP-1 expression in BYDP (**A**), CTLL-2 (**B**) and THP-1 (**C**) whole cell lysates.



SHIP-1 (P1C1): sc-8425. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic and membrane staining of cells in white pulp (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and membrane staining of lymphoid cells at high magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Sattler, M., et al. 1999. BRC/ABL Directly inhibits expression of SHIP, an SH2-containing polyinositol-5-phospatase involved in the regulation of hematopoiesis. Mol. Cell. Biol. 19: 7473-7480.
2. Barry, J.C., et al. 2016. Hyporesponsiveness to the anti-inflammatory action of interleukin-10 in type 2 diabetes. Sci. Rep. 6: 21244.
3. Nunes de Miranda, S.M., et al. 2016. Differential Lyn-dependence of the SHIP1-deficient mast cell phenotype. Cell Commun. Signal. 14: 12.
4. Deak, P.E., et al. 2017. Determination of crucial immunogenic epitopes in major peanut allergy protein, Ara h2, via novel nanoallergen platform. Sci. Rep. 7: 3981.
5. Täger, M., et al. 2017. SHIP1, but not an AML-derived SHIP-1 mutant, suppresses myeloid leukemia growth in a xenotransplantation mouse model. Gene Ther. 24: 749-753.
6. Somasundaram, R., et al. 2017. Analysis of SHIP1 expression and activity in Crohn's disease patients. PLoS ONE 12: e0182308.
7. Hope, J.L., et al. 2017. The transcription factor T-bet is regulated by microRNA-155 in murine anti-viral $CD8^+$ T cells via SHIP-1. Front. Immunol. 8: 1696.
8. Ruvolo, P.P., et al. 2018. Role of MSC-derived galectin 3 in the AML microenvironment. Biochim. Biophys. Acta 1865: 959-969.
9. Fernandes, S., et al. 2018. SHIP-1 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.