SANTA CRUZ BIOTECHNOLOGY, INC.

SHIP-2 (G-20): sc-14504

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The production, survival and function of monocytes and macrophages are regulated by the macrophage colony-stimulating factor M-CSF through its tyrosine kinase receptor Fms. Binding of M-CSF to Fms induces the tyrosine phosphorylation and association of SH2-containing inositol phosphatase SHIP with the phosphotyrosine-binding domain of Shc. The SHIP protein hydrolyzes PtdIns P3 to PtdIns Ps and results in strong inhibition of cell growth. SHIP is also a target for CD28, suggesting that SHIP may be involved in the regulation of T cell activation. SHIP has several splice variants and is expressed during hematopoiesis and spermatogenesis. SHIP-2, a homolog of SHIP, is expressed in both hemopoietic and non-hemopoietic cells. In addition to T cells and B cells, spleen, thymus and lung are shown to coexpress SHIP and SHIP-2. SHIP is also expressed in fibroblasts, heart, skeletal muscle and different brain areas and its expression is enhanced in TSH and EGF-stimulated cells. Like SHIP, SHIP-2 is tyrosine-phosphorylated and associates with Shc after ligation of the B cell receptor to FcγRII. SHIP-2 causes cell cycle arrest in G_1 phase in glioblastoma cells and plays a negative role in regulating the PI3K-PI3K-protein kinase B pathway. Both SHIP and SHIP-2 mediate FcγRIIB signaling, including inhibition of proliferation.

CHROMSOMAL LOCATION

Genetic locus: INPPL1 (human) mapping to 11q13.4; Inppl1 (mouse) mapping to 7 E3.

SOURCE

SHIP-2 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SHIP-2 of human 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-14504 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SHIP-2 (G-20) is recommended for detection of SHIP-2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SHIP-2 (G-20) is also recommended for detection of SHIP-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SHIP-2 siRNA (h): sc-39077, SHIP-2 siRNA (m): sc-39078, SHIP-2 shRNA Plasmid (h): sc-39077-SH, SHIP-2 shRNA Plasmid (m): sc-39078-SH, SHIP-2 shRNA (h) Lentiviral Particles: sc-39077-V and SHIP-2 shRNA (m) Lentiviral Particles: sc-39078-V.

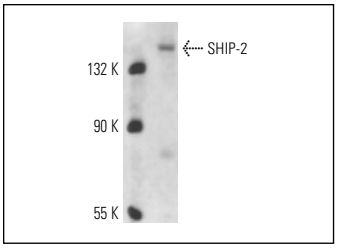
Molecular Weight of SHIP-2: 150-160 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NAMALWA cell lysate: sc-2234 or 3T3-L1 cell lysate: sc-2243.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SHIP-2 (G-20): sc-14504. Western blot analysis of SHIP-2 expression in 3T3-L1 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Pengal, R.A., et al. 2003. SHIP-2 inositol phosphatase is inducibly expressed in human monocytes and serves to regulate Fcγ receptor-mediated signaling. J. Biol. Chem. 278: 22657-22663.
2. Déléris, P., et al. 2003. SHIP-2 and PTEN are expressed and active in vascular smooth muscle cell nuclei, but only SHIP-2 is associated with nuclear speckles. J. Biol. Chem. 278: 38884-38891.
3. Bertelli, D.F., et al. 2003. Reversal of denervation-induced Insulin resistance by SHIP-2 protein synthesis blockade. Am. J. Physiol. Endocrinol. Metab. 284: 679-687.

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.