

# SHIP-2 (H-300): sc-25435

## 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 haemopoietic and non-haemopoietic 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<sub>1</sub> phase in glioblastoma cells and plays a negative role in regulating the PI 3-kinase-PI 3-kinase B pathway. Both SHIP and SHIP-2 mediate FcγRIIB signaling, including inhibition of proliferation.

## CHROMOSOMAL LOCATION

Genetic locus: INPPL1 (human) mapping to 11q13.4; Inpp1 (mouse) mapping to 7 E3.

## SOURCE

SHIP-2 (H-300) is a rabbit polyclonal antibody raised against amino acids 959-1258 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.

## APPLICATIONS

SHIP-2 (H-300) 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), 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).

SHIP-2 (H-300) 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.

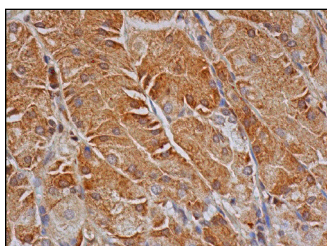
Molecular Weight of SHIP-2: 150-160 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, 3T3-L1 cell lysate: sc-2243 or KNRK whole cell lysate: sc-2214.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



SHIP-2 (H-300): sc-25435. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Campbell, K.S., et al. 2004. NKp44 triggers NK cell activation through DAP12 association that is not influenced by a putative cytoplasmic inhibitory sequence. *J. Immunol.* 172: 899-906.
2. Sweeney, M.C., et al. 2005. Decoding protein-protein interactions through combinatorial chemistry: sequence specificity of SHP-1, SHP-2, and SHIP SH2 domains. *Biochemistry* 44: 14932-14947.

## 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.


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Try **SHIP-2 (E-2): sc-166641** or **SHIP-2 (B-9): sc-515211**, our highly recommended monoclonal alternatives to SHIP-2 (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SHIP-2 (E-2): sc-166641**.