

Phospho-SHIP2 (Tyr1135) Antibody

100 µl
 (10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #3636
Swiss-Prot Acc. #O15357

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W	H	160 kDa	Rabbit**
Endogenous			

Background: SH2-containing inositol phosphatase 1 (SHIP1) is a hematopoietic phosphatase that hydrolyzes phosphatidylinositol-3,4,5-triphosphate to phosphatidylinositol-3,4-bisphosphate (1). SHIP1 is a cytosolic phosphatase with an SH2 domain in its amino terminus and two NPXY Shc binding motifs in its carboxy terminus (1,2). Upon receptor cross-linking, SHIP is first recruited to the membrane junction through binding of its SH2 domain to the phospho-tyrosine in the ITIM motif (2), followed by tyrosine phosphorylation on the NPXY motif (2). The membrane relocalization and phosphorylation on the NPXY motif is essential for the regulatory function of SHIP1 (3-5). Its effect on calcium flux, cell survival, growth, cell cycle arrest and apoptosis is mediated through the PI3K and Akt pathways (3-5). Tyr1021 is located in one of the NPXY motifs in SHIP1, and its phosphorylation is important for SHIP1 function (6).

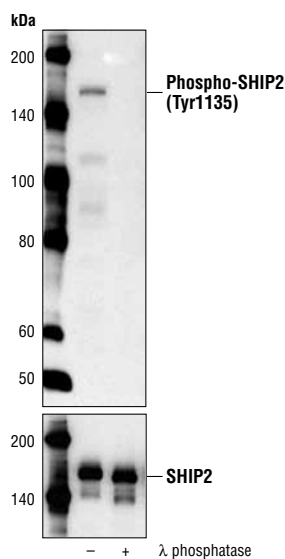
SHIP2, a homolog of SHIP1, is highly expressed in heart, skeletal muscle and placenta (7). SHIP2 negatively regulates insulin signaling (8) and polymorphisms in SHIP2 have been linked to hyperglycemia (9). Recent studies also suggest SHIP2 as a therapeutic target for the treatment of both obesity and type 2 diabetes (10,11). Tyr1135 is phosphorylated in human cancer cells (12-15).

Specificity/Sensitivity: Phospho-SHIP2 (Tyr1135) Antibody detects endogenous levels of SHIP2 when phosphorylated at Tyr1135.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr1135 of human SHIP2. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- Tridandapani, S. et al. (1997) *Mol Cell Biol* 17, 4305-11.
- Liu, L. et al. (1997) *J Biol Chem* 272, 8983-8.
- Malbec, O. et al. (2001) *J Biol Chem* 276, 30381-91.
- Carver, D.J. et al. (2000) *Blood* 96, 1449-56.
- Scharenberg, A.M. et al. (1998) *EMBO J* 17, 1961-72.
- Sattler, M. et al. (2001) *J Biol Chem* 276, 2451-8.
- Pesesse, X. et al. (1997) *Biochem Biophys Res Commun* 239, 697-700.
- Wada, T. et al. (2001) *Mol Cell Biol* 21, 1633-46.
- Ishida, S. et al. (2006) *Pancreas* 33, 63-7.
- Dyson, J.M. et al. (2005) *Int J Biochem Cell Biol* 37, 2260-5.
- Sasaoka, T. et al. (2006) *Pharmacol Ther* 112, 799-809.
- Liang, X. et al. (2006) *Proteomics* 6, 4554-64.
- Goss, V.L. et al. (2006) *Blood* 107, 4888-97.
- Guo, A. et al. (2008) *Proc Natl Acad Sci USA* 105, 692-7.
- Rikova, K. et al. (2007) *Cell* 131, 1190-203.



Western blot analysis of extracts from K562 cells, untreated or treated with λ phosphatase, using Phospho-SHIP2 (Tyr1135) Antibody (upper) or SHIP2 (C76A7) Rabbit mAb #2839 (lower).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.