

#2730 Store at -20°C

# SHIP2 Antibody



✓ 100 µl  
(10 western blots)

**Orders** ■ 877-616-CELL (2355)  
orders@cellsignal.com  
**Support** ■ 877-678-TECH (8324)  
info@cellsignal.com  
**Web** ■ www.cellsignal.com

rev. 08/23/10

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.

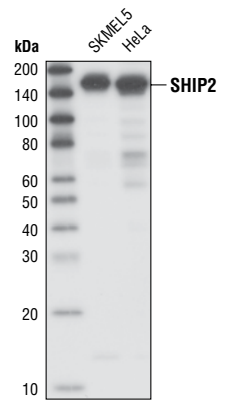
Applications W Endogenous	Species Cross-Reactivity* H	Molecular Wt. 160 kDa	Source Rabbit**
---------------------------------	--------------------------------	--------------------------	--------------------

**Background:** SH2-containing inositol phosphatase 1 (SHIP1) is a hemopoietic-specific 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, SHIP1 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). Tyrosine 1021 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).

**Specificity/Sensitivity:** SHIP2 Antibody detects the endogenous levels of total SHIP2 protein. It does not cross-react with SHIP1.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala1083 of human SHIP2. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of total cell lysates from SKMEL5 and HeLa cells, using SHIP2 Antibody.

### Background References:

- (1) Tridandapani, S. et al. (1997) *Mol. Cell Biol.* 8, 4305–4311.
- (2) Liu, L. et al. (1997) *J. Biol. Chem.* 272, 8983–8988.
- (3) Malbec, O. et al. (2001) *J. Biol. Chem.* 276, 30381–30391.
- (4) Carver, D.J. et al. (2000) *Blood* 96, 1449–1456.
- (5) Scharenberg, A.M. et al. (1998) *EMBO J.* 17, 1961–1972.
- (6) Sattler, M. et al. (2001) *J. Biol. Chem.* 276, 2451–2455.
- (7) Pesesse, X. et al. (1997) *Biochem. Biophys. Res. Commun.* 239, 697–700.
- (8) Wada, T. et al. (2001) *Mol. Cell Biol.* 21, 1633–1646.
- (9) Ishida, S. et al. (2006) *Pancreas* 33, 63–67.
- (10) Dyson, J.M. et al. (2005) *Int. J. Biochem. Cell Biol.* 37, 2260–2265.
- (11) Sasaoka, T. et al. (2006) *Pharmacol. Ther.* Epub in Press.

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

**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](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

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

© 2010 Cell Signaling Technology, Inc.

**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.