



**Orders:** 877-616-CELL (2355)  
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**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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#5445

## Phospho-SHIP2 (Tyr1135) (D33C6) XP<sup>®</sup> Rabbit mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

<b>Applications:</b> W, IP, FC-FP	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 160	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #O15357	<b>Entrez-Gene Id:</b> 3636
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### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation  
Flow Cytometry (Fixed/Permeabilized)

#### Dilution

1:1000  
1:200  
1:1600

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### Specificity/Sensitivity

Phospho-SHIP2 (Tyr1135) (D33C6) XP<sup>®</sup> Rabbit mAb detects endogenous levels of SHIP2 protein only when phosphorylated at Tyr1135.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr1135 of human SHIP2 protein.

### 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). Tyr1022 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).

### Background References

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

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

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

### Applications Key

**W:** Western Blotting **IP:** Immunoprecipitation **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

### Cross-Reactivity Key

**H:** Human

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