

#2008 Store at -20°C

Phospho-SHIP2 (Tyr986/987) Antibody


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3 Trask Lane | Danvers | Massachusetts | 01923 | USA
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Applications: WB	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 160	Source: Rabbit	UniProt ID: #O15357	Entrez-Gene Id: 3636
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Product Usage Information	Application Western Blotting	Dilution 1:1000
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.	
Specificity / Sensitivity	Phospho-SHIP2 (Tyr986/987) Antibody detects endogenous levels of SHIP2 when phosphorylated at Tyr986 and Tyr987.	
Species predicted to react based on 100% sequence homology:	Mouse, Rat	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr986 and Tyr987 of human SHIP2. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	<p>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). Tyr986 and Tyr987 are phosphorylated upon PDGF treatment of 3T3-L1 cells. Phosphorylation of these residues has also been observed in human cancer cells (12-15).</p>	
Background References	<ol style="list-style-type: none"> 1. Tridandapani, S. et al. (1997) <i>Mol Cell Biol</i> 17, 4305-11. 2. Liu, L. et al. (1997) <i>J Biol Chem</i> 272, 8983-8. 3. Malbec, O. et al. (2001) <i>J Biol Chem</i> 276, 30381-91. 4. Carver, D.J. et al. (2000) <i>Blood</i> 96, 1449-56. 5. Scharenberg, A.M. et al. (1998) <i>EMBO J</i> 17, 1961-72. 6. Sattler, M. et al. (2001) <i>J Biol Chem</i> 276, 2451-8. 7. Pesesse, X. et al. (1997) <i>Biochem Biophys Res Commun</i> 239, 697-700. 8. Wada, T. et al. (2001) <i>Mol Cell Biol</i> 21, 1633-46. 9. Ishida, S. et al. (2006) <i>Pancreas</i> 33, 63-7. 10. Dyson, J.M. et al. (2005) <i>Int J Biochem Cell Biol</i> 37, 2260-5. 11. Sasaoka, T. et al. (2006) <i>Pharmacol Ther</i> 112, 799-809. 12. Artemenko, Y. et al. (2007) <i>J Cell Physiol</i> 211, 598-607. 13. Goss, V.L. et al. (2006) <i>Blood</i> 107, 4888-97. 14. Rikova, K. et al. (2007) <i>Cell</i> 131, 1190-203. 15. Guo, A. et al. (2008) <i>Proc Natl Acad Sci USA</i> 105, 692-7. 	

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

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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