

#3751 Store at -20°C

Phospho-SHP-2 (Tyr542) Antibody


Cell Signaling
TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R	Endogenous	72	Rabbit	#Q06124	5781

Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:50
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-SHP-2 (Tyr542) Antibody detects endogenous levels of SHP-2 only when phosphorylated at Tyr542. This antibody may cross-react with activated receptor tyrosine kinases.	
Species predicted to react based on 100% sequence homology:	Monkey, Chicken, Xenopus	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr542 of human SHP-2 protein. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	SHP-2 (PTPN11) is a ubiquitously expressed, nonreceptor protein tyrosine phosphatase (PTP). It participates in signaling events downstream of receptors for growth factors, cytokines, hormones, antigens, and extracellular matrices in the control of cell growth, differentiation, migration, and death (1). Activation of SHP-2 and its association with Gab1 is critical for sustained Erk activation downstream of several growth factor receptors and cytokines (2). In addition to its role in Gab1-mediated Erk activation, SHP-2 attenuates EGF-dependent PI3 kinase activation by dephosphorylating Gab1 at p85 binding sites (3). SHP-2 becomes phosphorylated at Tyr542 and Tyr580 in its carboxy terminus in response to growth factor receptor activation (4). These phosphorylation events are thought to relieve basal inhibition and stimulate SHP-2 tyrosine phosphatase activity (5). Mutations in the corresponding gene result in a pair of clinically similar disorders (Noonan syndrome and LEOPARD syndrome) that may result from abnormal MAPK regulation (6).	
Background References	1. Qu, C.K. (2000) <i>Cell Res</i> 10, 279-88. 2. Maroun, C.R. et al. (2000) <i>Mol Cell Biol</i> 20, 8513-25. 3. Zhang, S.Q. et al. (2002) <i>Mol Cell Biol</i> 22, 4062-72. 4. Bennett, A.M. et al. (1994) <i>Proc Natl Acad Sci USA</i> 91, 7335-9. 5. Lu, W. et al. (2001) <i>Mol Cell</i> 8, 759-69. 6. Edouard, T. et al. (2007) <i>Cell Mol Life Sci</i> 64, 1585-90.	

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 IP: Immunoprecipitation
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

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.