

SHP1 Phospho-Regulation Antibody Sampler Kit

Catalog # **SK6280**

Kit Summary:

The SHP1 phospho-regulation antibody sampler kit can be used to detect SHP1 phosphorylation at Tyr-536 and Ser-591. The kit also includes an antibody to examine total SHP1 expression levels and secondary reagents for rabbit polyclonal and mouse monoclonal antibody detection.

Background:

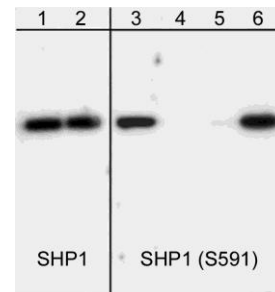
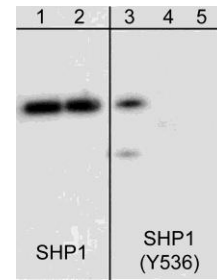
SHP1 (PTP1C, SH-PTP1, or HCP) is a protein-tyrosine phosphatase (PTP) involved in cell migration, cell proliferation, and immune cell function. This phosphatase contains two N-terminal SH2 domains and a C-terminal phosphatase domain. SHP1 associates with a variety of cytokine and growth factor receptors and regulates signal transduction through dephosphorylation of these receptors or their downstream effectors. Downstream of receptor activation, SHP1 regulates the transcriptional activity stimulated by JAK/Stat and MAPK pathways. SHP1 activity is regulated by both tyrosine and serine phosphorylation. Phosphorylation of Tyr-536 and Tyr-564 stimulates phosphatase activity and promotes interaction with Grb-2. Serine phosphorylation at Ser-591 is mediated by PKC α and leads to inhibition of phosphatase activity. Thus, phosphorylation at tyrosine relative to serine residues may be regulated by different cell signaling pathways to control SHP1 activity.

References:

Jones, M.L. et al. (2004) J. Biol. Chem. 279(39):40475.
Zhang, Z. et al. (2003) J. Biol. Chem. 278(7):4668.
Zhang, J. et al. (2000) Semin. Immunol. 12:361.

Product References:

SP1531 Simoneau, M. et al. (2008) J Biol Chem Epub:July 10. (WB: S591A transfectants)
SP1571 Verhagen, A.M. et al. (2009) J. Immunol. 181:2020. (WB: Mouse B cells)



Kit Components:

Catalog#	Description	Type	Size	Applications	Species Reactivity	MW (kDa)
SP1531	SHP1 (Ser-591), phospho-specific	Rabbit pAb	50 μ l	WB, E	H, R, M	68
SP1571	SHP1 (Tyr-536), phospho-specific	Rabbit pAb	50 μ l	WB, E	H, R, M	68
SM1601	SHP1 (C-terminal region)	Mouse mAb	50 μ l	WB, E, IP, ICC	H, R, M	68
MS3001	Anti-Mouse Ig:HRP	Donkey pAb	100 μ l	WB, E		
RS3251	Anti-Rabbit Ig Light-Chain Specific:HRP	Mouse mAb	100 μ l	WB, E		

Applications: WB = Western blot, E = ELISA, IP = Immunoprecipitation, ICC = Immunocytochemistry

Species: H = Human, R = Rat, M = Mouse.

Buffers and Storage:

Rabbit polyclonal and mouse monoclonal affinity-purified antibodies are supplied in phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C . Stable for 1 year.

Secondary reagents are supplied in phosphate-buffered saline, 50% glycerol, and 1 mg/ml BSA. Store at -20°C . Stable for 1 year.

FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

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