Revision 1

#9793 Store at -20°C

SHP-2 Antibody Sampler Kit

1 Kit (3 x 20 microliters)

Cell Signaling TECHNOLOGY®

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Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-SHP-2 (Tyr542) Antibody	3751	20 µl	72 kDa	Rabbit
SHP-2 (D50F2) Rabbit mAb	3397	20 µl	72 kDa	Rabbit IgG
Phospho-SHP-2 (Tyr580) Antibody	3703	20 µl	72 kDa	Rabbit
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The SHP-2 Antibody Sampler Kit provides an economical means to evaluate levels of SHP-2 protein phosphorylated at the specified sites, as well as total SHP-2 levels. The kit contains enough primary and secondary antibody to perform two western blot experiments per antibody.

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.

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) *Cell Res* 10, 279-88.
2. Maroun, C.R. et al. (2000) *Mol Cell Biol* 20, 8513-25.
3. Zhang, S.Q. et al. (2002) *Mol Cell Biol* 22, 4062-72.
4. Bennett, A.M. et al. (1994) *Proc Natl Acad Sci USA* 91, 7335-9.
5. Lu, W. et al. (2001) *Mol Cell* 8, 759-69.
6. Edouard, T. et al. (2007) *Cell Mol Life Sci* 64, 1585-90.

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