

#3397 Store at -20C

SHP-2 (D50F2) Rabbit mAb


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

Applications: WB, IP, IHC-P	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 72	Source/Isotype: Rabbit IgG	UniProt ID: #Q06124	Entrez-Gene Id: 5781
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Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunohistochemistry (Paraffin)

Dilution

1:1000
1:50
1:50

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

SHP-2 (D50F2) Rabbit mAb detects endogenous levels of total SHP-2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the carboxy-terminal sequence of human SHP-2.

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.

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 **IHC-P:** Immunohistochemistry (Paraffin)

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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