Human/Mouse/Rat SHP-2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF10121

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat SHP-2 in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human SHP-2 Glu2-Thr435 Accession # Q06124
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

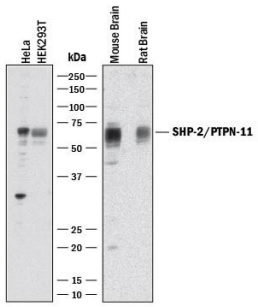
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below

DATA

Western Blot



Detection of Human, Mouse, and Rat SHP-2 by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, HEK293T human embryonic kidney cell line, mouse brain tissue, and rat brain tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human/Mouse/Rat SHP-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF10121) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for SHP-2 at approximately 72 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Src-Homology domain-2 containing protein tyrosine Phosphatase 2 (SHP-2), also called protein tyrosine phosphatase, non-receptor type 11 (PTPN11), PTP1D, PTP2C, and SYP, is an enzyme that dephosphorylates tyrosine residues in proteins. The protein contains two Src homology 2 (SH2) domains, which both regulate the activity of the enzyme (1) and allow it to selectively bind to SH2 sites on proteins such as Dok1, IRS1, and the insulin receptor (2). SHP-2 plays a unique stimulatory role in cell signaling. Cells lacking SHP-2 have poor mobility because the hyper-phosphorylation of FAK and other proteins in the focal adhesion complex (3) prevents turnover of cellular attachment points. Without SHP-2, sustained ERK stimulation does not take place (4). The Y992 phosphorylation site of EGFR is a particularly good substrate for SHP-2 (5) and a phosphopeptide containing this sequence can be used to measure the activity of the enzyme (R&D Systems, Catalog # ES006) by detecting release of phosphate (R&D Systems, Catalog # DY996).

References:

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2. Clemmons, D.R. and Maile, L.A. (2005) Mol. Endocrinol. **19**:1.
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4. Maroun, C.R. *et al.* (2000) Mol. Cell. Biol. **20**:8513.
5. Sugimoto, S. *et al.* (1993) J. Biol. Chem. **269**:22771.

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