Human/Mouse/Rat PTP1B Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF13661

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse and rat PTP1B in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human PTP1B Glu2-Asn321 Accession # P18031
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.

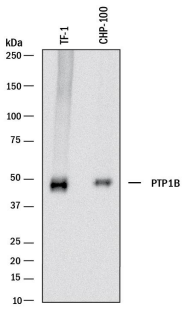
APPLICATIONS

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	0.5-1 µg/mL	See Below
Simple Western	10 µg/mL	See Below

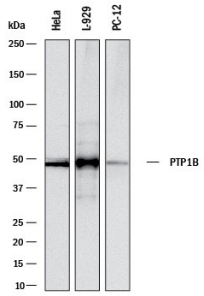
DATA

Western Blot



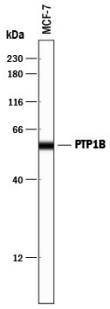
Detection of Human PTP1B by Western Blot. Western blot shows lysates of TF-1 human erythroleukemic cell line and CHP-100 human neuroblastoma cell line. PVDF membrane was probed with 0.5 µg/mL of Goat Anti-Human/Mouse/Rat PTP1B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF13661) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for PTP1B at approximately 50 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Western Blot



Detection of Human, Mouse, and Rat PTP1B by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, L-929 mouse fibroblast cell line, and PC-12 rat adrenal pheochromocytoma cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human/Mouse/Rat PTP1B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF13661) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for PTP1B at approximately 50 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western



Detection of Human PTP1B by Simple Western™. Simple Western lane view shows lysates of MCF-7 human breast cancer cell line, loaded at 0.2 mg/mL. A specific band was detected for PTP1B at approximately 57 kDa (as indicated) using 10 µg/mL of Goat Anti-Human/Mouse/Rat PTP1B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF13661) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

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.

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BACKGROUND

Protein tyrosine phosphatase 1B (PTP1B) is an enzyme that removes phosphate groups covalently attached to tyrosine residues in proteins. This ubiquitously expressed enzyme is anchored in the endoplasmic reticulum by its C-terminal end and has its catalytic regions exposed to the cytosol. The recombinant protein lacks the C-terminal 114 amino acids but is fully active. PTP1B will dephosphorylate a wide variety of phosphoproteins, such as receptors for the growth factors insulin and epidermal growth factor (EGF), c-Src and β-catenin. Of particular interest is the observation that PTP1B knock-out mice are resistant to high-caloric intake-induced obesity and have exaggerated insulin responses, suggesting that PTP1B may play an important role in regulating growth factor responsiveness.

References:

1. Angers-Loustau, *et al*. (1999) Biochem. Cell Biol. **77**:493.
2. Sarmiento, *et al*. (1998) J. Biol. Chem. **273**:26368.
3. Bjorge, *et al*. (2000) J. Biol. Chem. **52**:41439.
4. Balsamo, *et al*. (1996) J. Cell Biol. **134**:801.
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