

# PTP1B Phospho-Regulation Antibody Sampler Kit

Catalog # PK6290

## Kit Summary:

The PTP1B phospho-regulation antibody sampler kit can be used to detect phosphorylation of PTP1B at Ser-50 and Tyr-152. The kit also includes an antibody to examine total PTP1B expression levels and secondary reagents for rabbit polyclonal and mouse monoclonal antibody detection.

## Background:

PTP1B is a nonreceptor type protein tyrosine phosphatase that has essential roles in insulin and leptin signaling, as well as important functions in growth factor and integrin signaling. The structure of PTP1B includes a conserved phosphatase domain, C-terminal hydrophobic residues for targeting to the cytoplasmic face of the endoplasmic reticulum, and proline-rich regions characteristic of SH3 domain binding motifs. PTP1B can interact with N-Cadherin and dephosphorylate  $\beta$ -catenin associated with cadherin complexes. PTP1B also interacts with Insulin and EGF receptors, and undergoes phosphorylation after receptor stimulation. Tyrosine phosphorylation at Tyr-66, Tyr-152, and Tyr-153 occurs after insulin receptor activation, and tyrosine phosphorylation of Tyr-152 may be required for interactions with N-Cadherin. In addition, Akt can phosphorylate Ser-50 and this phosphorylation can reduce PTP1B activity.

## References:

Bandyopadhyay, D. et al. (1997) J. Biol. Chem. 272(3):1639.  
Rhee, J. et al. (2001) J. Biol. Chem. 276(9):6640.  
Lingamanaidu, V. et al. (2001) Molecular Endocrinology 15(10):1768.

## Kit Components:

Catalog#	Description	Type	Size	Applications	Species Reactivity	MW (kDa)
PP2411	PTP1B (Ser-50), phospho-specific	Rabbit pAb	50 $\mu$ l	WB, E	H, R, M	50
PP2391	PTP1B (Tyr-152), phospho-specific	Rabbit pAb	50 $\mu$ l	WB, E	H, R, M	50
PP2351	PTP1B (a.a.146-157)	Rabbit pAb	50 $\mu$ l	WB, E	H, R, M	50
PM2341	PTP1B (C-terminal region)	Mouse mAb	50 $\mu$ l	WB, E, ICC	H	50
MS3001	Anti-Mouse Ig:HRP	Donkey pAb	100 $\mu$ l	WB, E		
RS3251	Anti-Rabbit Ig Light-Chain Specific:HRP	Mouse mAb	100 $\mu$ l	WB, E		

Applications: WB = Western blot, E = ELISA, 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  $-20^{\circ}\text{C}$ . Stable for 1 year.

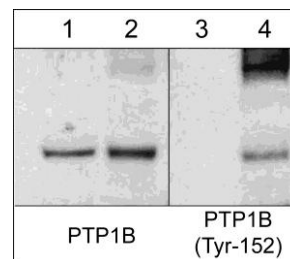
Secondary reagents are supplied in phosphate-buffered saline, 50% glycerol, and 1 mg/ml BSA. Store at  $-20^{\circ}\text{C}$ . Stable for 1 year.

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

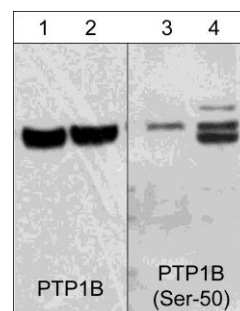
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Western blot image of mouse SYF cSrc-transformed cells untreated (lanes 1 & 3) or treated (lanes 2 & 4) with pervanadate (1 mM for 30 min.). The blots were probed with rabbit polyclonal anti-PTP1B (a.a. 146-157) (lanes 1 & 2) or anti-PTP1B (Tyr-152) (lanes 3 & 4).



Western blot image of human Jurkat cells untreated (lanes 1 & 3) or treated (lanes 2 & 4) with calyculin A (100 nM for 30 min). The blots were probed with monoclonal anti-PTP1B (lanes 1 & 2) or polyclonal anti-PTP1B (Ser-50) (lanes 3 & 4).