Anti-PTP1B Antibody [JJ0935]

ET1701-90

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Zebrafish
Applications:	WB, IF-Cell, IF-Tissue, IHC-P, FC
Molecular Wt:	Predicted band size: 50 kDa
Clone number:	JJ0935

Description: The phosphorylation of proteins at tyrosine residues has long been recognized as an important regulatory component of signal transduction. This is a reversible process, involving both enzymes that phosphorylate proteins on tyrosine residues as well as a rapidly expanding family of protein tyrosine phosphatases. These latter enzymes bear little resemblance to either the protein serine and protein threonine phosphatases or to the acid and alkaline phosphatases. In most tissues, the major PTPase is a vanadate- and molybdate-sensitive protein. On the basis of sequence analysis, PTP1B (PTPase 1B) expressed in human placenta exhibits similarities both with the common leukocyte antigen (CD45) and with LAR, a homolog of the neural adhesion molecule (NCAM). PTP1B is synthesized as a 435 amino acid precursor protein which is cleaved to generate the active 321 amino acid enzyme.

Immunogen: Synthetic peptide within Human PTP1B aa 374-400 / 435.

Positive control: HCT 116 cell lysate, HeLa cell lysate, Jurkat cell lysate, MCF7 cell lysate, HepG2 cell lysate, A549 cell lysate, zebrafish tissue lysate, MCF-7 cell lysate, A431 cell lysate, Hela, MCF-7, HepG2, human tonsil tissue, Raji.

Subcellular location: Endoplasmic reticulum membrane.

Database links: SwissProt: P18031 Human

Recommended Dilutions:

WB	1:1,000-1:2,000
IF-Cell	1:100-1:500
IF-Tissue	1:100-1:500
IHC-P	1:50-1:200
FC	1:50-1:100

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

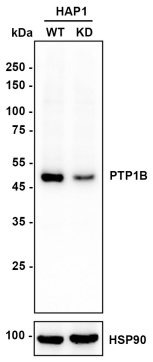

Fig1: Western blot analysis of PTP1B on different lysates with Rabbit anti-PTP1B antibody (ET1701-90) at 1/1,000 dilution.

Lane 1: HAP1-parental cell lysate
Lane 2: HAP1-PTP1B KD cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 50 kDa
Observed band size: 50 kDa

Exposure time: 2 minutes; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1701-90) at 1/1,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

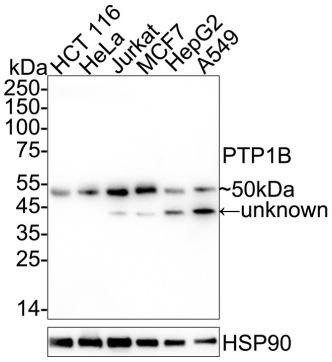

Fig2: Western blot analysis of PTP1B on different lysates with Rabbit anti-PTP1B antibody (ET1701-90) at 1/1,000 dilution.

Lane 1: HCT 116 cell lysate
Lane 2: HeLa cell lysate
Lane 3: Jurkat cell lysate
Lane 4: MCF7 cell lysate
Lane 5: HepG2 cell lysate
Lane 6: A549 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 50 kDa
Observed band size: 50 kDa

Exposure time: 25 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1701-90) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

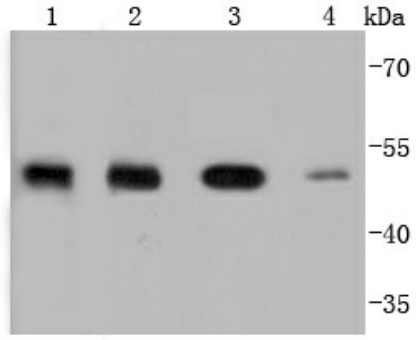

Fig3: Western blot analysis of PTP1B on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ET1701-90, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.
Positive control:
Lane 1: Zebrafish tissue lysate
Lane 2: MCF-7 cell lysate
Lane 3: HepG2 cell lysate
Lane 4: A431 cell lysate

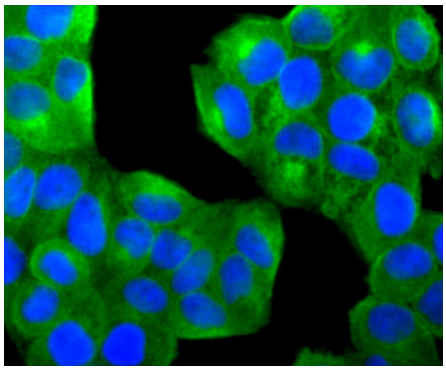

Fig4: ICC staining of PTP1B in Hela cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ET1701-90, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

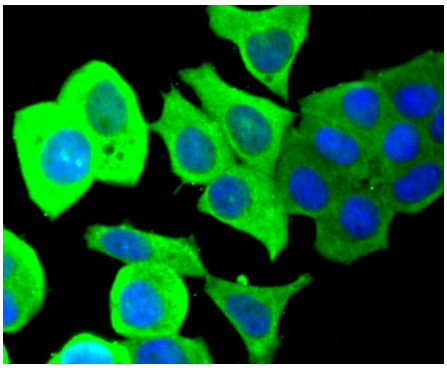

Fig5: ICC staining of PTP1B in MCF-7 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ET1701-90, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

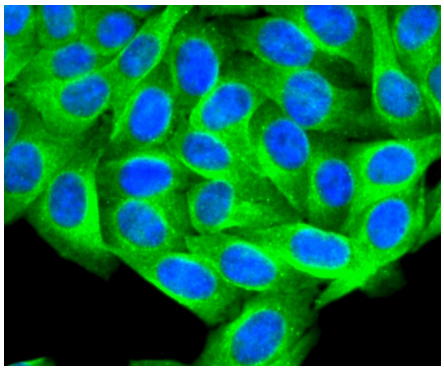

Fig6: ICC staining of PTP1B in HepG2 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ET1701-90, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

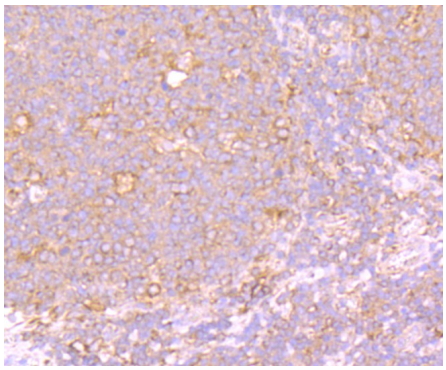

Fig7: Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-PTP1B antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1701-90, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

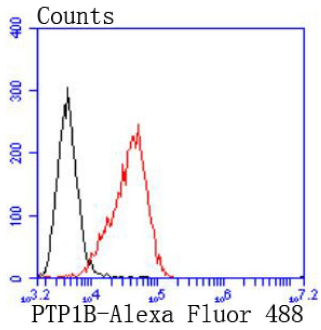

Fig8: Flow cytometric analysis of PTP1B was done on Raji cells. The cells were fixed, permeabilized and stained with the primary antibody (ET1701-90, 1/50) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated Goat anti-Rabbit IgG Secondary antibody at 1/1000 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Weidmann MD et al. Mena(INV) dysregulates cortactin phosphorylation to promote invadopodium maturation. Sci Rep 6:36142 (2016).
2. Borges Bde C et al. Protein tyrosine phosphatase-1B contributes to LPS-induced leptin resistance in male rats. Am J Physiol Endocrinol Metab 308:E40-50 (2015).