

Rabbit PTPN22 Polyclonal Antibody | anti-PTPN22 antibody

PTPN22 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326179	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

PTPN22; Polyclonal Antibody; PTPN22 Antibody; Hematopoietic cell protein tyrosine phosphatase 70Z PEP; Hematopoietic cell protein-tyrosine phosphatase 70Z-PEP; Lymphoid phosphatase; Lymphoid specific protein tyrosine phosphatase; lymphoid-specific; inducible human protein tyrosine phosphatase; Lyp 1; Lyp 2; LyP; Lyp1; Lyp2; LyPTP; OTTHUMP00000013720; OTTHUMP00000013721; OTTHUMP00000233450; OTTHUMP00000233451; PEP; PEST-domain phosphatase; Protein tyrosine phosphatase non receptor type 22 (lymphoid); Protein tyrosine phosphatase non receptor type 22; Protein tyrosine phosphatase non receptor type 8; formerly; PTN22_HUMAN; PTPN 22; PTPN 8; Ptpn22; PTPN8; Tyrosine-protein phosphatase non-receptor type 22; anti-PTPN22 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	PTPN22 antibody detects endogenous levels of total PTPN22
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	779
Applicable Applications for anti-PTPN22 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PTPN22
Subcellular Location	Cytoplasm.
Tissue Specificity	Expressed in bone marrow, B and T-cells, PBMCs, natural killer cells, monocytes, dendritic cells and neutrophils (PubMed:15208781). Both isoform 1 and 4 are predominantly expressed in lymphoid tissues and cells. Isoform 1 is expressed in thymocytes and both mature B and T-cells.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



WB (Western Blot)

Western blot analysis of extracts of Jurkat, using PTPN22 antibody. The lane on the left is treated with the antigen-specific peptide.



IF (Immunofluorescence)

AAA326179 staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



IHC (Immunohistochemistry)

AAA326179 at 1/100 staining Mouse brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-PTPN22 antibody

Description: PTPN22 (Lyp/PEP) is a cytoplasmic phosphatase expressed by hematopoietic cells (1, 2). PTPN22 associates with the tyrosine kinase Csk to inhibit T cell receptor signaling through inactivation of Src kinases (3, 4). Csk phosphorylates Src kinases on an inhibitory tyrosine, while PTPN22 dephosphorylates an activating site (4). PTPN22(-/-) mice have higher levels of activated Lck than wild-type, resulting in greater T cell expansion and increased serum antibody levels (5). Research studies have shown that a single-nucleotide polymorphism, 1858T of the PTPN22 gene which encodes the amino acid substitution R620W, confers increased risk for multiple autoimmune diseases including type I diabetes, rheumatoid arthritis, systemic lupus erythematosus, and Graves disease (6-9). Interestingly, although the R620W substitution disrupts the interaction between Csk and PTPN22, it is actually a gain-of-function mutation resulting in increased phosphatase activity (6, 10, 11). Recent evidence suggests that the autoimmune phenotype associated with the R620W variant is the result of increased calpain-mediated degradation and decreased protein levels of PTPN22 (12).

Function: Acts as negative regulator of T-cell receptor (TCR) signaling by direct dephosphorylation of the Src family kinases LCK and FYN, ITAMs of the TCRz/CD3 complex, as well as ZAP70, VAV, VCP and other key signaling molecules (PubMed:16461343, PubMed:18056643). Associates with and probably dephosphorylates CBL. Dephosphorylates LCK at its activating 'Tyr-394' residue (PubMed:21719704). Dephosphorylates ZAP70 at its activating 'Tyr-493' residue (PubMed:16461343). Dephosphorylates the immune system activator SKAP2 (PubMed:21719704). Positively regulates toll-like receptor (TLR)-induced type 1 interferon production (PubMed:23871208). Promotes host antiviral responses mediated by type 1 interferon (By similarity). Regulates NOD2-induced pro-inflammatory cytokine secretion and autophagy (PubMed:23991106).

Subunit Structure: Interacts with CSK (PubMed:15208781). Interacts with LPXN (By similarity). Interacts with CBL (PubMed:10068674). Interacts with TRAF3 (via MATH domain); the interaction promotes TRAF3 polyubiquitination (PubMed:23871208).

Post-translational Modifications: Phosphorylation on Ser-35 by PKC/PRKCD abrogates its ability to dephosphorylate and inactivate the SRC family kinases.

Similarity: Belongs to the protein-tyrosine phosphatase family. Non-receptor class 4 subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	301171669
NCBI GeneID	26191
NCBI Accession #	NP_001180360.1
NCBI GenBank Nucleotide #	NM_001193431.2
UniProt Accession #	Q9Y2R2; O95063; O95064; Q6IPX8; Q8WVM1; A0N0K6; B1ALC8; D4NZ71; E9PLD8; E9PPI1

Molecular Weight	Observed: 92 kDa Predicted: 92 kDa
NCBI Official Full Name	tyrosine-protein phosphatase non-receptor type 22 isoform 3
NCBI Official Synonym Full Names	protein tyrosine phosphatase, non-receptor type 22
NCBI Official Symbol	PTPN22
NCBI Official Synonym Symbols	LYP; PEP; LYP1; LYP2; PTPN8; PTPN22.5; PTPN22.6
NCBI Protein Information	tyrosine-protein phosphatase non-receptor type 22
UniProt Protein Name	Tyrosine-protein phosphatase non-receptor type 22
UniProt Gene Name	PTPN22
UniProt Synonym Gene Names	PTPN8; LyP; PEP

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/ptpn22-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/326179>