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Anti-PTPN22 Picoband Antibody

Catalog # ABO12862

Product Information

Application	WB, IHC-P, E
Primary Accession	P29352
Host	Rabbit
Reactivity	Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for PTPN22 detection. Tested with WB, IHC-P, Direct ELISA in Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	19260
Other Names	Tyrosine-protein phosphatase non-receptor type 22, 3.1.3.48, Hematopoietic cell protein-tyrosine phosphatase 70Z-PEP, PEST-domain phosphatase, PEP, Ptpn22, Ptpn8
Calculated MW	89714
Application Details	Western blot, 0.1-0.5 □g/ml Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml Direct ELISA, 0.1-0.5 □g/ml
Subcellular Localization	Cytoplasm.
Tissue Specificity	Spleen, thymus, lymph node and bone marrow.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Immunogen	E. coli-derived mouse PTPN22 recombinant protein (Position: M1-Q309).
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C; for one year. After r˚Constitution, at 4˚C; for one month. It˚Can also be aliquotted and stored frozen at -20˚C; for a longer time. Avoid repeated freezing and thawing.

Protein Information

Name	Ptpn22
Synonyms	Ptpn8
Function	Acts as a 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 (By similarity). Associates with and probably dephosphorylates CBL (By similarity). Dephosphorylates LCK at its activating 'Tyr-394' residue (By similarity). Dephosphorylates ZAP70 at its activating 'Tyr-492' residue (By similarity). Dephosphorylates the immune system activator SKAP2 (By similarity). Positively regulates toll-like receptor (TLR)-induced type 1 interferon production (PubMed:23871208). Promotes host antiviral responses mediated by type 1 interferon (PubMed:23871208). Regulates NOD2-induced pro-inflammatory cytokine secretion and autophagy (PubMed:23991106). Acts as an activator of NLRP3 inflammasome assembly by mediating dephosphorylation of 'Tyr-861' of NLRP3 (PubMed:27043286). Dephosphorylates phospho-anandamide (p-AEA), an endocannabinoid to anandamide (also called N-arachidonoylethanolamide) (PubMed:16938887).
Cellular Location	Cytoplasm.
Tissue Location	Brain (at protein level) (PubMed:16938887). Spleen, thymus, lymph node and bone marrow (PubMed:1373816)

Background

Protein tyrosine phosphatase, non-receptor type 22 (lymphoid), also known as PTPN22, is a protein that in humans is encoded by the PTPN22 gene. This gene encodes of member of the non-receptor class 4 subfamily of the protein-tyrosine phosphatase family. The encoded protein is a lymphoid-specific intracellular phosphatase that associates with the molecular adapter protein CBL and may be involved in regulating CBL function in the T-cell receptor signaling pathway. Mutations in this gene may be associated with a range of autoimmune disorders including Type 1 Diabetes, rheumatoid arthritis, systemic lupus erythematosus and Graves' disease. Alternatively spliced transcript variants encoding distinct isoforms have been described.

Images

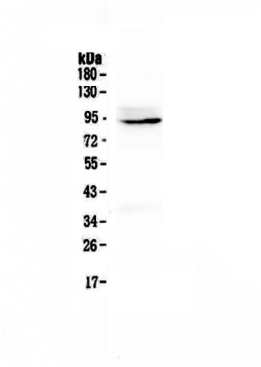


Figure 1. Western blot analysis of PTPN22 using anti-PTPN22 antibody (ABO12862). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat thymus tissue lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PTPN22 antigen affinity purified polyclonal antibody (Catalog # ABO12862) at 0.5 □¼g/mL overnight at 4 □°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour

at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for PTPN22 at approximately 92KD. The expected band size for PTPN22 is at 92KD.

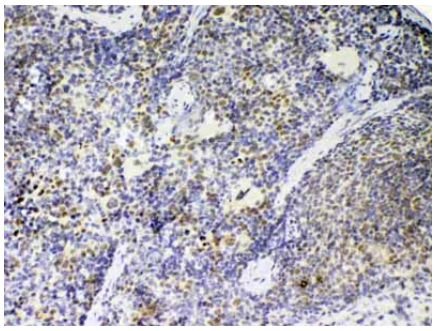


Figure 2. IHC analysis of PTPN22 using anti-PTPN22 antibody (ABO12862).PTPN22 was detected in paraffin-embedded section of mouse spleen tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-PTPN22 Antibody (ABO12862) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

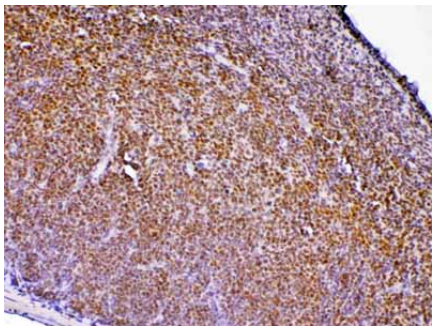


Figure 3. IHC analysis of PTPN22 using anti-PTPN22 antibody (ABO12862).PTPN22 was detected in paraffin-embedded section of rat lymphaden tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-PTPN22 Antibody (ABO12862) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

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