

Anti-TCPTP Picoband Antibody
Catalog # ABO12189**Specification**

Anti-TCPTP Picoband Antibody - Product Information

Application	WB, IHC-P
Primary Accession	P17706
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Tyrosine-protein phosphatase non-receptor type 2 (PTPN2) detection. Tested with WB, IHC-P in Human;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-TCPTP Picoband Antibody - Additional Information

Gene ID 5771

Other Names

Tyrosine-protein phosphatase non-receptor type 2, 3.1.3.48, T-cell protein-tyrosine phosphatase, TCPTP, PTPN2, PTPT

Calculated MW

48473 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization

Isoform 1: Endoplasmic reticulum . Endoplasmic reticulum-Golgi intermediate compartment . Targeted to the endoplasmic reticulum by its C-terminal hydrophobic region. .

Tissue Specificity

Ubiquitously expressed. Isoform 2 is probably the major isoform. Isoform 1 is expressed in T-cells and in placenta. .

Protein Name

Tyrosine-protein phosphatase non-receptor type 2

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

E.coli-derived human TCPTP recombinant protein (Position: M1-C330). Human TCPTP shares 91.4%

and 92% amino acid (aa) sequence identity with mouse and rat TCPTP, respectively.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, 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.

Sequence Similarities

Belongs to the protein-tyrosine phosphatase family. Non-receptor class 1 subfamily.

Anti-TCPTP Picoband Antibody - Protein Information

Name PTPN2

Synonyms PTPT

Function

Non-receptor type tyrosine-specific phosphatase that dephosphorylates receptor protein tyrosine kinases including INSR, EGFR, CSF1R, PDGFR. Also dephosphorylates non-receptor protein tyrosine kinases like JAK1, JAK2, JAK3, Src family kinases, STAT1, STAT3 and STAT6 either in the nucleus or the cytoplasm. Negatively regulates numerous signaling pathways and biological processes like hematopoiesis, inflammatory response, cell proliferation and differentiation, and glucose homeostasis. Plays a multifaceted and important role in the development of the immune system. Functions in T- cell receptor signaling through dephosphorylation of FYN and LCK to control T-cells differentiation and activation. Dephosphorylates CSF1R, negatively regulating its downstream signaling and macrophage differentiation. Negatively regulates cytokine (IL2/interleukin-2 and interferon)-mediated signaling through dephosphorylation of the cytoplasmic kinases JAK1, JAK3 and their substrate STAT1, that propagate signaling downstream of the cytokine receptors. Also regulates the IL6/interleukin-6 and IL4/interleukin-4 cytokine signaling through dephosphorylation of STAT3 and STAT6 respectively. In addition to the immune system, it is involved in anchorage-dependent, negative regulation of EGF-stimulated cell growth. Activated by the integrin ITGA1/ITGB1, it dephosphorylates EGFR and negatively regulates EGF signaling. Dephosphorylates PDGFRB and negatively regulates platelet-derived growth factor receptor-beta signaling pathway and therefore cell proliferation. Negatively regulates tumor necrosis factor-mediated signaling downstream via MAPK through SRC dephosphorylation. May also regulate the hepatocyte growth factor receptor signaling pathway through dephosphorylation of the hepatocyte growth factor receptor MET. Also plays an important role in glucose homeostasis. For instance, negatively regulates the insulin receptor signaling pathway through the dephosphorylation of INSR and control gluconeogenesis and liver glucose production through negative regulation of the IL6 signaling pathways. May also bind DNA.

Cellular Location

[Isoform 1]: Endoplasmic reticulum. Endoplasmic reticulum-Golgi intermediate compartment. Note=Targeted to the endoplasmic reticulum by its C-terminal hydrophobic region

Tissue Location

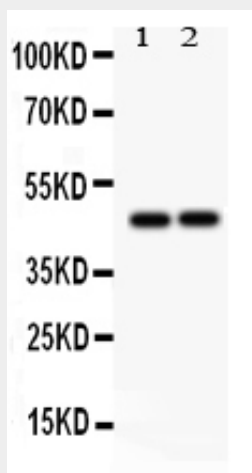
Ubiquitously expressed. Isoform 2 is probably the major isoform. Isoform 1 is expressed in T-cells and in placenta

Anti-TCPTP Picoband Antibody - Protocols

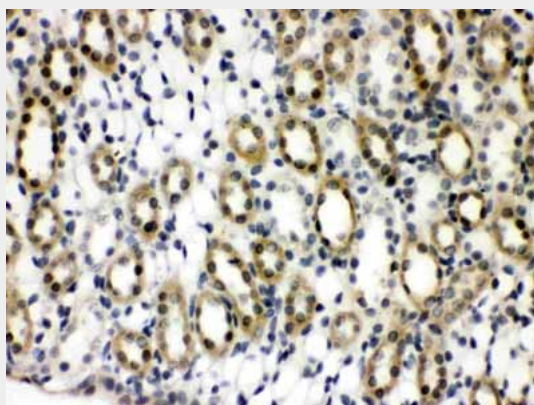
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

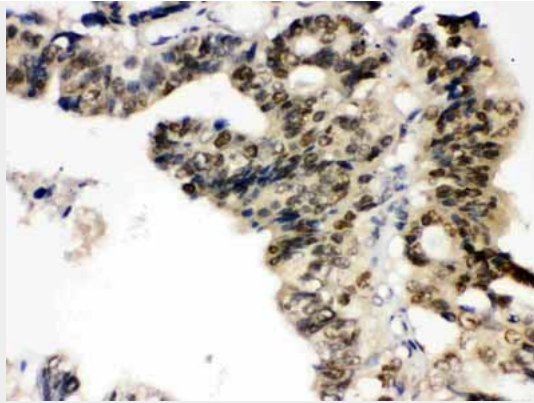
Anti-TCPTP Picoband Antibody - Images



Anti- TCPTP Picoband antibody, ABO12189, Western blotting
All lanes: Anti TCPTP (ABO12189) at 0.5ug/ml
Lane 1: HELA Whole Cell Lysate at 40ug
Lane 2: JURKAT Whole Cell Lysate at 40ug
Predicted bind size: 48KD
Observed bind size: 48KD



Anti- TCPTP Picoband antibody, ABO12189, IHC(P)
IHC(P): Rat Kidney Tissue



Anti- TCPTP Picoband antibody, ABO12189,IHC(P)IHC(P): Human Intestinal Cancer Tissue

Anti-TCPTP Picoband Antibody - Background

TCPTP is also called as PTPN2. The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. Members of the PTP family share a highly conserved catalytic motif, which is essential for the catalytic activity. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. Epidermal growth factor receptor and the adaptor protein Shc were reported to be substrates of this PTP, which suggested the roles in growth factor mediated cell signaling. Multiple alternatively spliced transcript variants encoding different isoforms have been found. Two highly related but distinctly processed pseudogenes that localize to chromosomes 1 and 13, respectively, have been reported.