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PTPN22 / PEP Antibody (clone 1A6)

Mouse Monoclonal Antibody
Catalog # ALS14522

Specification

PTPN22 / PEP Antibody (clone 1A6) - Product Information

Application	**IHC**
Primary Accession	Q9Y2R2
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**92kDa KDa**

PTPN22 / PEP Antibody (clone 1A6) - Additional Information

Gene ID 26191

Other Names
Tyrosine-protein phosphatase non-receptor type 22, 3.1.3.48, Hematopoietic cell protein-tyrosine phosphatase 70Z-PEP, Lymphoid phosphatase, LyP, PEST-domain phosphatase, PEP, PTPN22, PTPN8

Target/Specificity
Human PTPN22

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions
PTPN22 / PEP Antibody (clone 1A6) is for research use only and not for use in diagnostic or therapeutic procedures.

PTPN22 / PEP Antibody (clone 1A6) - 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 (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). 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) (By similarity).

Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:P29352}.

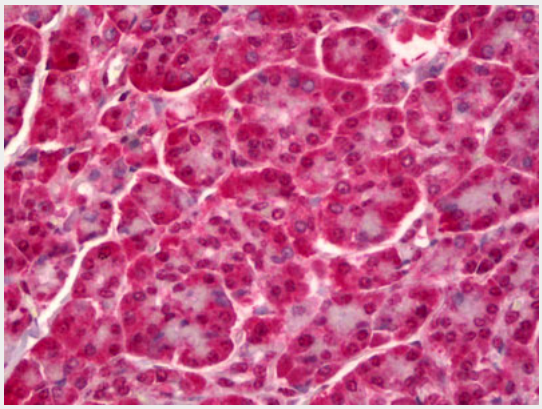
Tissue Location
Expressed in bone marrow, B and T-cells, PBMCs, natural killer cells, monocytes, dendritic cells and neutrophils (PubMed:15208781). Both isoform 1 and 4 are predominantly expressed in lymphoid tissues and cells. Isoform 1 is expressed in thymocytes and both mature B and T-cells.

PTPN22 / PEP Antibody (clone 1A6) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PTPN22 / PEP Antibody (clone 1A6) - Images



Anti-PTPN22 antibody IHC of human pancreas.

PTPN22 / PEP Antibody (clone 1A6) - Background

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LCK at its activating 'Tyr-394' residue. Dephosphorylates ZAP70 at its activating 'Tyr-493' residue. Dephosphorylates the immune system activator SKAP2.

PTPN22 / PEP Antibody (clone 1A6) - References

Cohen S.,et al.Blood 93:2013-2024(1999).
Wang S.,et al.BMC Mol. Biol. 11:78-78(2010).
Liu T.,et al.Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Livingston R.J.,et al.Submitted (OCT-2006) to the EMBL/GenBank/DDBJ databases.