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PTPN11 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1758a

Specification

PTPN11 Antibody - Product Information

Application	**E, WB, IF, FC, IHC**
Primary Accession	Q06124
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**68.4kDa KDa**

Description
The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP contains two tandem Src homology-2 domains, which function as phospho-tyrosine binding domains and mediate the interaction of this PTP with its substrates. This PTP is widely expressed in most tissues and plays a regulatory role in various cell signaling events that are important for a diversity of cell functions, such as mitogenic activation, metabolic control, transcription regulation, and cell migration. Mutations in this gene are a cause of Noonan syndrome as well as acute myeloid leukemia. Two transcript variants encoding different isoforms have been found for this gene.

Immunogen
Purified recombinant fragment of human PTPN11 (AA: 263-329) expressed in E. Coli.

Formulation
Purified antibody in PBS with 0.05% sodium azide

PTPN11 Antibody - Additional Information

Gene ID 5781

Other Names
Tyrosine-protein phosphatase non-receptor type 11, 3.1.3.48, Protein-tyrosine phosphatase 1D, PTP-1D, Protein-tyrosine phosphatase 2C, PTP-2C, SH-PTP2, SHP-2, Shp2, SH-PTP3, PTPN11, PTP2C, SHPTP2

Dilution
E~~1/10000
WB~~1/500 - 1/2000
IF~~1/200 - 1/1000
FC~~1/200 - 1/400
IHC~~1/200 - 1/1000

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PTPN11 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PTPN11 Antibody - Protein Information

Name PTPN11

Synonyms PTP2C, SHPTP2

Function
Acts downstream of various receptor and cytoplasmic protein tyrosine kinases to participate in the signal transduction from the cell surface to the nucleus (PubMed:10655584, PubMed:14739280, PubMed:18559669, PubMed:18829466, PubMed:26742426, PubMed:28074573). Positively regulates MAPK signal transduction pathway (PubMed:28074573). Dephosphorylates GAB1, ARHGAP35 and EGFR (PubMed:28074573). Dephosphorylates ROCK2 at 'Tyr-722' resulting in stimulation of its RhoA binding activity (PubMed:18559669). Dephosphorylates CDC73 (PubMed:26742426). Dephosphorylates SOX9 on tyrosine residues, leading to inactivate SOX9 and promote ossification (By similarity). Dephosphorylates tyrosine-phosphorylated NEDD9/CAS-L (PubMed:19275884).

Cellular Location
Cytoplasm. Nucleus

Tissue Location
Widely expressed, with highest levels in heart, brain, and skeletal muscle.

PTPN11 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 Cytomety
- Cell Culture

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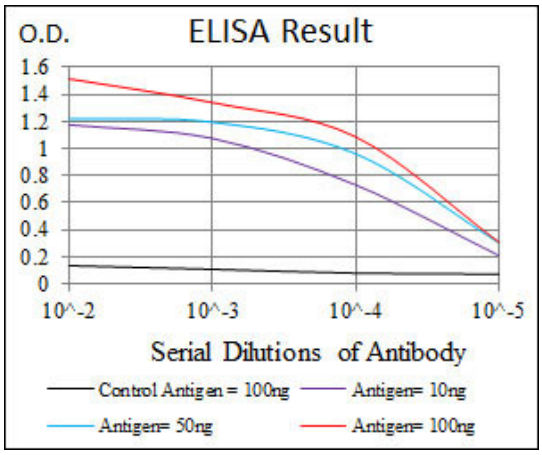

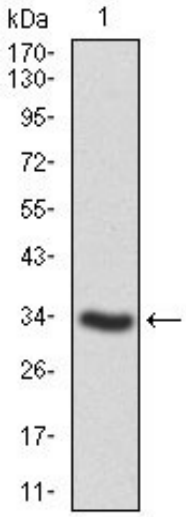

Figure 1: Western blot analysis using PTPN11 mAb against human PTPN11 recombinant protein. (Expected MW is 33.4 kDa)

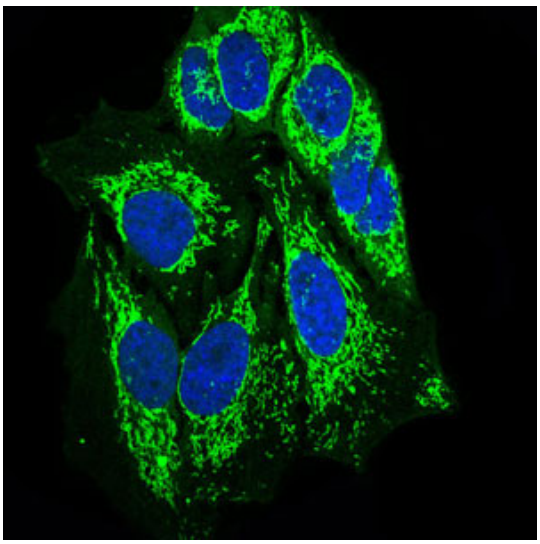

Figure 2: Immunofluorescence analysis of HeLa cells using PTPN11 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

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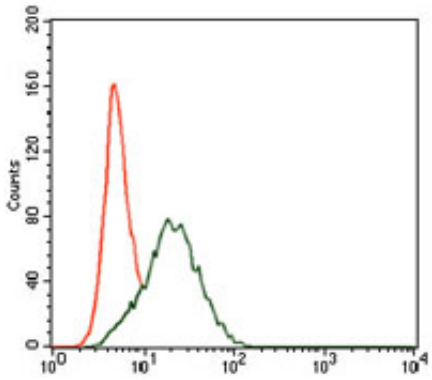

Figure 3: Flow cytometric analysis of HepG2 cells using PTPN11 mouse mAb (green) and negative control (red).

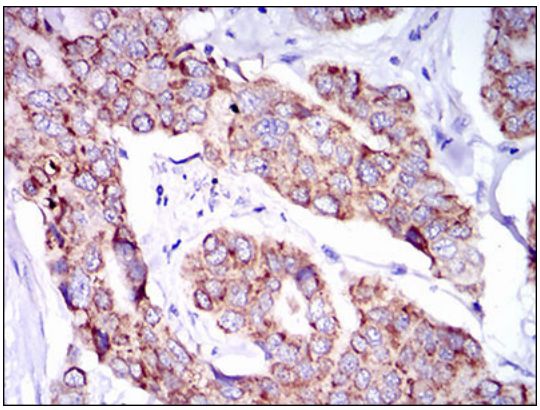

Figure 4: Immunohistochemical analysis of paraffin-embedded breast cancer tissues using PTPN11 mouse mAb with DAB staining.

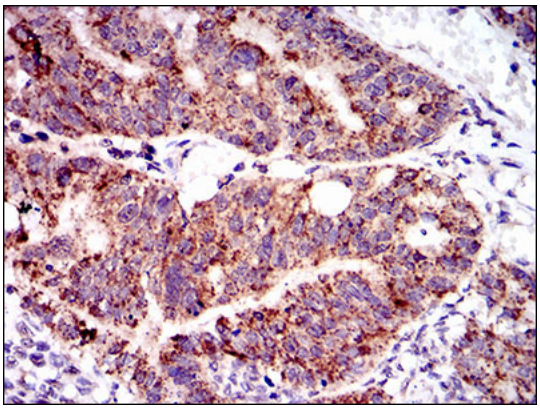

Figure 5: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using PTPN11 mouse mAb with DAB staining.

PTPN11 Antibody - References

1.Blood. 2011 Aug 11;118(6):1504-15.2.Cancer Cell. 2011 May 17;19(5):629-39.