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PTPN11 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1758a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	Q06124
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6D9
Isotype	IgG1
Calculated MW	68011
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

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	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
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.

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, PubMed:32184441). 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). Acts as an effector of PDCD1-mediated inhibition of T-cell response: recruited by phosphorylated PDCD1, mediating dephosphorylation of key T-cell receptor (TCR) proximal signaling molecules, leading to TCR signaling inhibition (PubMed:32184441).
Cellular Location	Cytoplasm. Nucleus
Tissue Location	Widely expressed, with highest levels in heart, brain, and skeletal muscle.

References

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

Images

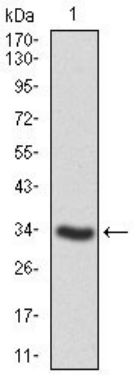


Figure 1: Western blot analysis using PTPN11 mAb against human PTPN11 recombinant protein. (Expected MW is 33.4 kDa)

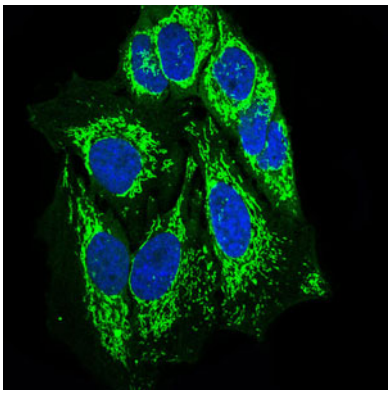


Figure 2: Immunofluorescence analysis of HeLa cells using PTPN11 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

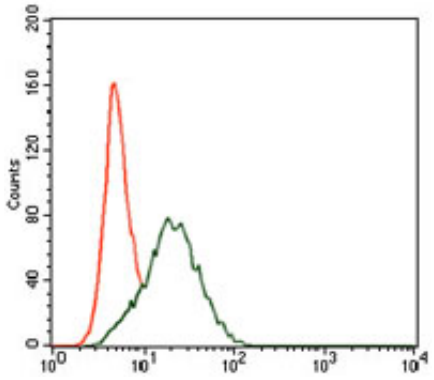


Figure 3: Flow cytometric analysis of HepG2 cells using PTPN11 mouse mAb (green) and negative control (red).

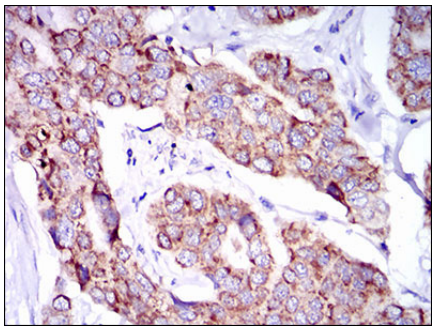


Figure 4: Immunohistochemical analysis of paraffin-embedded breast cancer tissues using PTPN11 mouse mAb with DAB staining.

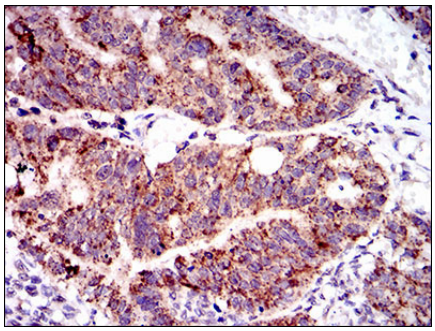


Figure 5: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using PTPN11 mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.