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PTP4A2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1865a

Product Information

Application	WB, E
Primary Accession	Q12974
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5B6F4
Isotype	IgG2b
Calculated MW	19127
Description	The protein encoded by this gene belongs to a small class of the protein tyrosine phosphatase (PTP) family. PTPs are cell signaling molecules that play regulatory roles in a variety of cellular processes. PTPs in this class contain a protein tyrosine phosphatase catalytic domain and a characteristic C-terminal prenylation motif. This PTP has been shown to primarily associate with plasmic and endosomal membrane through its C-terminal prenylation. This PTP was found to interact with the beta-subunit of Rab geranylgeranyltransferase II (beta GGT II), and thus may function as a regulator of GGT II activity. Overexpression of this gene in mammalian cells conferred a transformed phenotype, which suggested its role in tumorigenesis. Alternatively spliced transcript variants have been described. Related pseudogenes exist on chromosomes 11, 12 and 17.
Immunogen	Purified recombinant fragment of human PTP4A2 (AA: 58-162) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	8073
Other Names	Protein tyrosine phosphatase type IVA 2, 3.1.3.48, HU-PP-1, OV-1, PTP(CAAXII), Protein-tyrosine phosphatase 4a2, Protein-tyrosine phosphatase of regenerating liver 2, PRL-2, PTP4A2, PRL2, PTPCAAX2
Dilution	WB~~1/500 - 1/2000 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	PTP4A2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PTP4A2
Synonyms	PRL2, PTPCAAX2
Function	Protein tyrosine phosphatase which stimulates progression from G1 into S phase during mitosis. Promotes tumors. Inhibits geranylgeranyl transferase type II activity by blocking the association between RABGGTA and RABGGTB.
Cellular Location	Cell membrane. Early endosome. Cytoplasm.
Tissue Location	Ubiquitously expressed, with highest levels in skeletal muscle, heart and thymus. Overexpressed in prostate tumor tissue.

Background

This gene encodes a member of the insulin-like growth factor (IGF)-binding protein (IGFBP) family. IGFBPs bind IGFs with high affinity, and regulate IGF availability in body fluids and tissues and modulate IGF binding to its receptors. This protein binds IGF-I and IGF-II with relatively low affinity, and belongs to a subfamily of low-affinity IGFBPs. It also stimulates prostacyclin production and cell adhesion. Alternatively spliced transcript variants encoding different isoforms have been described for this gene, and one variant has been associated with retinal arterial macroaneurysm (PMID:21835307). ;

References

1. Cancer Res. 2010 Nov 1;70(21):8959-67. 2. Blood Cells Mol Dis. 2010 Apr 15;44(4):209-14.

Images

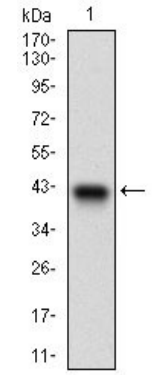


Figure 1: Western blot analysis using PTP4A2 mAb against human PTP4A2 recombinant protein. (Expected MW is 37.5 kDa)

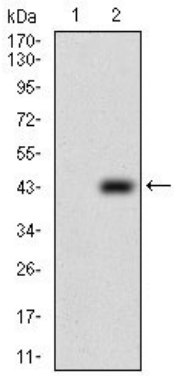


Figure 2: Western blot analysis using PTP4A2 mAb against HEK293 (1) and PTP4A2 (AA: 58-162)-hIgGFc transfected HEK293 (2) cell lysate.

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