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PTPLA Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13486a

Product Information

Application	WB, IHC-P, E
Primary Accession	B0YJ81
Other Accession	NP_055056.3
Reactivity	Human
Predicted	Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33378
Calculated MW	32388
Antigen Region	37-66

Additional Information

Gene ID	9200
Other Names	Very-long-chain (3R)-3-hydroxyacyl-CoA dehydratase 1, 3-hydroxyacyl-CoA dehydratase 1, HACD1, Cementum attachment protein, Protein-tyrosine phosphatase-like member A, PTPLA, HACD1
Target/Specificity	This PTPLA antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 37-66 amino acids from the N-terminal region of human PTPLA.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PTPLA Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HACD1 {ECO:0000303|PubMed:15164054, ECO:0000312|HGNC:HGNC:9639}
Function	[Isoform 1]: Catalyzes the third of the four reactions of the long-chain fatty

	acids elongation cycle. This endoplasmic reticulum- bound enzymatic process, allows the addition of two carbons to the chain of long- and very long-chain fatty acids/VLCFAs per cycle. This enzyme catalyzes the dehydration of the 3-hydroxyacyl-CoA intermediate into trans-2,3-enoyl-CoA, within each cycle of fatty acid elongation. Thereby, it participates in the production of VLCFAs of different chain lengths that are involved in multiple biological processes as precursors of membrane lipids and lipid mediators.
Cellular Location	[Isoform 1]: Endoplasmic reticulum membrane; Multi-pass membrane protein
Tissue Location	Isoform 1 is highly expressed in the myocardium, and to a lesser extent in skeletal and smooth muscular tissues including those from stomach, jejunum, and bladder. Also detected in gingival fibroblasts, periodontal ligament cells, osteoblasts and cementoblasts (PubMed:11054553, PubMed:22067203). Isoform 2 is specifically expressed by cementoblasts but also detected in periodontal ligament cells, heart, liver and kidney (at protein level) (PubMed:22067203).

Background

The protein encoded by this gene contains a characteristic catalytic motif of the protein tyrosine phosphatases (PTPs) family. The PTP motif of this protein has the highly conserved arginine residue replaced by a proline residue; thus it may represent a distinct class of PTPs. Members of the PTP family are known to be signaling molecules that regulate a variety of cellular processes. This gene was preferentially expressed in both adult and fetal heart. A much lower expression level was detected in skeletal and smooth muscle tissues, and no expression was observed in other tissues. The tissue specific expression in the developing and adult heart suggests a role in regulating cardiac development and differentiation.

References

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Liang, X., et al. Hum. Mutat. 30(3):463-471(2009)
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