

**PTPLA Antibody (N-term) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP13486a****Specification**

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**PTPLA Antibody (N-term) Blocking peptide - Product Information**Primary Accession [BOYJ81](#)**PTPLA Antibody (N-term) Blocking peptide - 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**

The synthetic peptide sequence used to generate the antibody AP13486a was selected from the N-term region of PTPLA. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**PTPLA Antibody (N-term) Blocking peptide - 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).

### **PTPLA Antibody (N-term) Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

### **PTPLA Antibody (N-term) Blocking peptide - Images**

### **PTPLA Antibody (N-term) Blocking peptide - 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.

### **PTPLA Antibody (N-term) Blocking peptide - References**

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010) Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009) Liang, X., et al. Hum. Mutat. 30(3):463-471(2009) Lamesch, P., et al. Genomics 89(3):307-315(2007) Grupe, A., et al. Am. J. Hum. Genet. 78(1):78-88(2006)