

# PLOD1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)  
Catalog # AP12656c

## Product Information

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<b>Application</b>	WB, IHC-P, FC, E
<b>Primary Accession</b>	<a href="#">Q02809</a>
<b>Other Accession</b>	<a href="#">Q9R0E2</a> , <a href="#">NP_000293.2</a>
<b>Reactivity</b>	Human, Rat, Mouse
<b>Predicted</b>	Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB30211
<b>Calculated MW</b>	83550
<b>Antigen Region</b>	66-94

## Additional Information

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<b>Gene ID</b>	5351
<b>Other Names</b>	Procollagen-lysine, 2-oxoglutarate 5-dioxygenase 1, Lysyl hydroxylase 1, LH1, PLOD1, LLH, PLOD
<b>Target/Specificity</b>	This PLOD1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 66-94 amino acids from the N-terminal region of human PLOD1.
<b>Dilution</b>	WB~~1:1000 IHC-P~~1:100~500 FC~~1:25 E~~Use at an assay dependent concentration.
<b>Format</b>	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.
<b>Storage</b>	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.
<b>Precautions</b>	PLOD1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	PLOD1
<b>Synonyms</b>	LLH, PLOD

<b>Function</b>	Part of a complex composed of PLOD1, P3H3 and P3H4 that catalyzes hydroxylation of lysine residues in collagen alpha chains and is required for normal assembly and cross-linking of collagen fibrils (By similarity). Forms hydroxylysine residues in -Xaa-Lys- Gly- sequences in collagens (PubMed: <a href="#">10686424</a> , PubMed: <a href="#">15854030</a> , PubMed: <a href="#">8621606</a> ). These hydroxylysines serve as sites of attachment for carbohydrate units and are essential for the stability of the intermolecular collagen cross-links (Probable).
<b>Cellular Location</b>	Rough endoplasmic reticulum membrane; Peripheral membrane protein; Luminal side

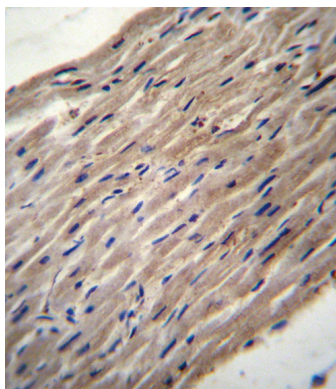
## Background

Lysyl hydroxylase is a membrane-bound homodimeric protein localized to the cisternae of the endoplasmic reticulum. The enzyme (cofactors iron and ascorbate) catalyzes the hydroxylation of lysyl residues in collagen-like peptides. The resultant hydroxylysyl groups are attachment sites for carbohydrates in collagen and thus are critical for the stability of intermolecular crosslinks. Some patients with Ehlers-Danlos syndrome type VI have deficiencies in lysyl hydroxylase activity.

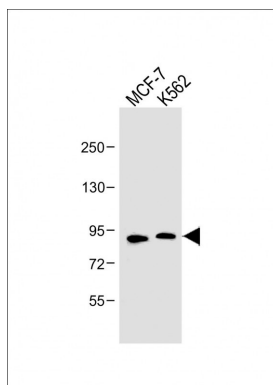
## References

Johnatty, S.E., et al. PLoS Genet. 6 (7), E1001016 (2010) :  
Huang, Q.Y., et al. Bone 44(5):984-988(2009)  
Yamada, Y., et al. Int. J. Mol. Med. 19(5):791-801(2007)  
Tasker, P.N., et al. Osteoporos Int 17(7):1078-1085(2006)  
Giunta, C., et al. Mol. Genet. Metab. 86 (1-2), 269-276 (2005) :

## Images

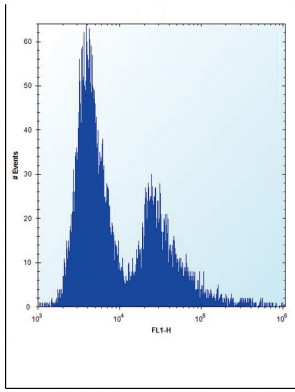


PLOD1 Antibody (N-term) (Cat. #AP12656c) immunohistochemistry analysis in formalin fixed and paraffin embedded human heart tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of PLOD1 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



All lanes : Anti-PLOD1 Antibody (N-term) at 1:1000 dilution  
Lane 1: MCF-7 whole cell lysate  
Lane 2: K562 whole cell lysate  
Lysates/proteins at 20 µg per lane.  
Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 84 kDa  
Blocking/Dilution buffer: 5% NFDM/TBST.

PLOD1 Antibody (N-term) (Cat. #AP12656c) flow



cytometric analysis of U251 cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

## Citations

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- [Impaired collagen biosynthesis and cross-linking in aorta of patients with bicuspid aortic valve.](#)
- [Absence of the ER Cation Channel TMEM38B/TRIC-B Disrupts Intracellular Calcium Homeostasis and Dysregulates Collagen Synthesis in Recessive Osteogenesis Imperfecta.](#)
- [MBTPS2 mutations cause defective regulated intramembrane proteolysis in X-linked osteogenesis imperfecta.](#)

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