

**PLOD1 Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AW5400**

**Specification**

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**PLOD1 Antibody (N-term) - Product Information**

Application	WB, FC,E
Primary Accession	<a href="#">O02809</a>
Other Accession	<a href="#">O9R0E2</a> , <a href="#">NP_000293.2</a>
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	H=84,88;M=84;R=84 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

**PLOD1 Antibody (N-term) - Additional Information**

**Gene ID** 5351

**Antigen Region**  
66-94

**Other Names**

Procollagen-lysine, 2-oxoglutarate 5-dioxygenase 1, Lysyl hydroxylase 1, LH1, PLOD1, LLH, PLOD

**Dilution**

WB~~1:1000

FC~~1:25

**Target/Specificity**

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.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. 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**

PLOD1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**PLOD1 Antibody (N-term) - Protein Information**

**Name** PLOD1

**Synonyms** LLH, PLOD

### Function

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="http://www.uniprot.org/citations/10686424" target="\_blank">10686424</a>, PubMed: <a href="http://www.uniprot.org/citations/15854030" target="\_blank">15854030</a>, PubMed: <a href="http://www.uniprot.org/citations/8621606" target="\_blank">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).

### Cellular Location

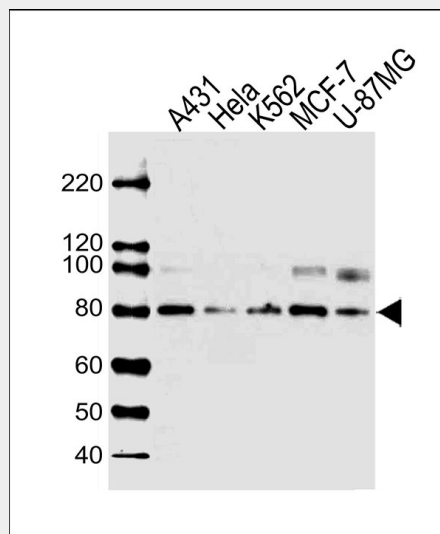
Rough endoplasmic reticulum membrane; Peripheral membrane protein; Luminal side

### PLOD1 Antibody (N-term) - Protocols

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

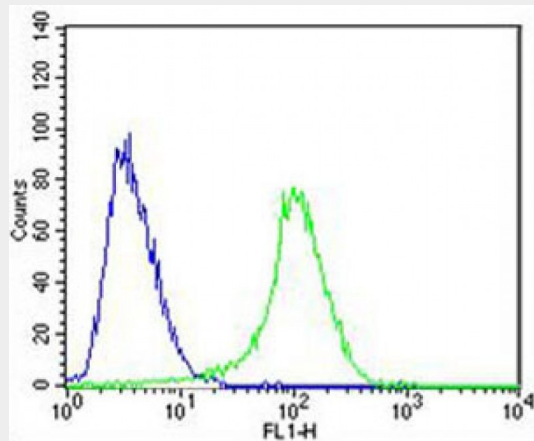
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### PLOD1 Antibody (N-term) - Images



All lanes : Anti-PLOD1 Antibody (N-term) at 1:1000 dilution Lane 1: A431 whole cell lysates Lane 2: HeLa whole cell lysates Lane 3: K562 whole cell lysates Lane 4: MCF-7 whole cell lysates Lane 5: U-87MG whole cell lysates 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.



Overlay histogram showing U-87 MG cells stained with AW5400 (green line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AW5400, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) (1583138) at 1/400 dilution for 40 min at 37°C. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >10, 000 events was performed.

#### **PLOD1 Antibody (N-term) - 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.

#### **PLOD1 Antibody (N-term) - 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) :