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PLOD1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5400

Product Information

Application	WB, FC
Primary Accession	Q02809
Other Accession	Q9R0E2, NP_000293.2
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	83550
Isotype	Rabbit IgG
Antigen Source	HUMAN

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.

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-linkling of collagen fibrils (By similarity). Forms hydroxylysine residues in -Xaa-Lys- Gly- sequences in collagens (PubMed:10686424, PubMed:15854030, PubMed:8621606). 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; Lumenal side

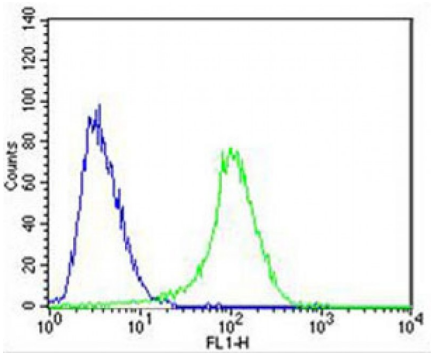
Background

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.

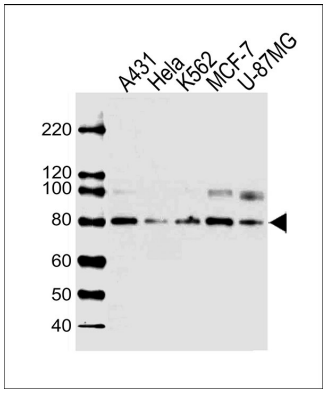
References

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



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 icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AW5400, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit lgG (H+L) (1583138) at 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.