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PLOD3 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12733a

Product Information

Application	WB, E
Primary Accession	O60568
Other Accession	NP_001075.1
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32395
Calculated MW	84785
Antigen Region	78-105

Additional Information

Gene ID	8985
Other Names	Procollagen-lysine, 2-oxoglutarate 5-dioxygenase 3, Lysyl hydroxylase 3, LH3, PLOD3
Target/Specificity	This PLOD3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 78-105 amino acids from the N-terminal region of human PLOD3.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
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	PLOD3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PLOD3
Function	Multifunctional enzyme that catalyzes a series of essential post-translational modifications on Lys residues in procollagen (PubMed:11956192,

	PubMed:12475640, PubMed:18298658, PubMed:18834968, PubMed:30089812). Plays a redundant role in catalyzing the formation of hydroxylysine residues in -Xaa-Lys-Gly- sequences in collagens (PubMed:11956192, PubMed:12475640, PubMed:18298658, PubMed:18834968, PubMed:30089812, PubMed:9582318, PubMed:9724729). Plays a redundant role in catalyzing the transfer of galactose onto hydroxylysine groups, giving rise to galactosyl 5-hydroxylysine (PubMed:12475640, PubMed:18298658, PubMed:18834968, PubMed:30089812). Has an essential role by catalyzing the subsequent transfer of glucose moieties, giving rise to 1,2-glucosylgalactosyl-5-hydroxylysine residues (PubMed:10934207, PubMed:11896059, PubMed:11956192, PubMed:12475640, PubMed:18298658, PubMed:18834968, PubMed:30089812). Catalyzes hydroxylation and glycosylation of Lys residues in the MBL1 collagen- like domain, giving rise to hydroxylysine and 1,2-glucosylgalactosyl-5-hydroxylysine residues (PubMed:25419660). Essential for normal biosynthesis and secretion of type IV collagens (Probable) (PubMed:18834968). Essential for normal formation of basement membranes (By similarity).
Cellular Location	Rough endoplasmic reticulum. Endoplasmic reticulum lumen. Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q9R0E1}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q9R0E1}; Lumenal side {ECO:0000250|UniProtKB:Q9R0E1}. Secreted Secreted, extracellular space {ECO:0000250|UniProtKB:Q9R0E1}. Note=The majority of the secreted protein is associated with the extracellular matrix. {ECO:0000250|UniProtKB:Q9R0E1}
Tissue Location	Ubiquitous (PubMed:9724729). Detected in heart, placenta and pancreas and at lower levels in lung, liver and skeletal muscle (PubMed:9582318, PubMed:9724729).

Background

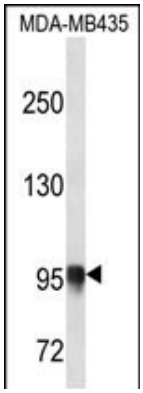
The protein encoded by this gene is a membrane-bound homodimeric enzyme that is localized to the cisternae of the rough endoplasmic reticulum. The enzyme (cofactors iron and ascorbate) catalyzes the hydroxylation of lysyl residues in collagen-like peptides. The resultant hydroxylysyl groups are attachment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

References

Wang, C., et al. J. Cell. Mol. Med. 13(3):508-521(2009)
Salo, A.M., et al. Am. J. Hum. Genet. 83(4):495-503(2008)
Salo, A.M., et al. J. Cell. Physiol. 207(3):644-653(2006)
Wang, C., et al. Matrix Biol. 21(7):559-566(2002)
Rautavuoma, K., et al. J. Biol. Chem. 277(25):23084-23091(2002)

Images

PLOD3 Antibody (N-term) (Cat. #AP12733a) western blot analysis in MDA-MB435 cell line lysates (35ug/lane).This demonstrates the PLOD3 antibody detected the PLOD3 protein (arrow).



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