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[Marker Primary Antibody]

Rabbit Anti-PLOD2/Biotin Conjugated antibody

Catalog Number: SL12731R-Bio

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-PLOD2/Biotin
Immunogen:	KLH conjugated synthetic peptide derived from human PLOD2
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	IHC-P=1:100-500 IHC-F=1:100-500 ICC/IF=1:100-500 ELISA=1:5000-10000 IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	(predicted:Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,Sheep)
Background:	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. Mutations in the coding region of this gene are associated with Bruck syndrome. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008] **Function:** Forms hydroxylysine residues in -Xaa-Lys-Gly- sequences in

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	collagens. These hydroxylysines serve as sites of attachment for carbohydrate units and are essential for the stability of the intermolecular collagen cross-links. **Subcellular Location:** Rough endoplasmic reticulum membrane. **Tissue Specificity:** Highly expressed in pancreas and muscle. Isoform 1 and isoform 2 are expressed in the majority of the examined cell types. Isoform 2 is specifically expressed in skin, lung, dura and aorta. DISEASE: Defects in PLOD2 are the cause of Bruck syndrome type 2 (BRKS2) [MIM:609220]. Bruck syndrome, also known as osteogenesis imperfecta with congenital joint contractures, is an autosomal recessive disease characterized by generalized osteopenia, joint contractures at birth, fragile bones and short stature. It can be distinguished from osteogenesis imperfecta by the absence of hearing loss and dentinogenesis imperfecta, and by the presence of clubfoot and congenital joint limitations. The molecular defect is an aberrant cross-linking of bone collagen, due to underhydroxylation of lysine residues within the telopeptides of type I collagen, whereas the lysine residues in the triple helix are normal. **Similarity:** Contains 1 Fe2OG dioxygenase domain. **Database links:** **Entrez Gene:** 5352 Human **Entrez Gene:** 26432 Mouse **Entrez Gene:** 300901 Rat Omim: 601865 Human **SwissProt:** O00469 Human **SwissProt:** Q9R0B9 Mouse **SwissProt:** Q811A3 Rat **Unigene:** 477866 Human **Unigene:** 79983 Mouse **Unigene:** 12945 Rat Important **Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.