

## Recombinant Human PLOD2

**Cat. No.** PLOD2-31030TH    **Lot. No.** (See product label)

### SPECIFICATION

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>Product Overview</b>   | Recombinant full length mature Human PLOD2, isoform 2 with N terminal proprietary tag. Predicted MW 106.63 kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Species</b>            | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>             | Wheat Germ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>ProteinLength</b>      | 732 amino acids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Description</b>        | <p>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.</p> |
| <b>Molecular Weight</b>   | 106.630kDa inclusive of tags                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Tissue specificity</b> | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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| <b>Form</b>                     | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Purity</b>                   | Proprietary Purification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Storage buffer</b>           | pH: 8.00 Constituents: 0.3% Glutathione, 0.79% Tris HCl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Storage</b>                  | Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Sequences of amino acids</b> | <p>DSEKPSSIPTDKLLVITVATKESDGFHRFMQSAKYFNNTV KVLGQGEEWRGGDGIN</p> <p>SIGGGQKVRLMKEVMEHYADQDDL VVMFTECFDVIFAGGP EEV LKKFQKANHKVV</p> <p>FAADGILWP DKRLADKYPVVHIGKRYLNSGGFIGYAPYVNRIVQQWNLQ DNDDDQ</p> <p>LFYTKVYIDPLKREAINITLDHKCKIFQTLNGAV DEVVLKFENGKARAKNTFYETLPVA</p> <p>INGNGPTKILLNYFG NYVPNSWTQDNGCTLCEFDTVDL SAVDVHPNVSIGVFIEQ PT</p> <p>PFLPRFLDILLTLDYPKEALKLFIHNKEVYHEKDIKVF FDKAKHEIKTIKIVGPEENLSQ</p> <p>AEARNMGMDFCRQDEKCD YYFSVDADVLTNPRTLKILIEQNRKIIAPLVTRHGKLW</p> <p>S NFWGALSPDGY YARSEDYVDIVQGNRVGVWNVPYMANVYL IKGKTLRSEMNER</p> <p>NYFVRDKLDPDMALCRNAREMTLQREK DSPTPETFQMLSPPKGVFMYISNRHEFG</p> <p>RLLSTANYNTSH YNNDLWQIFENPVDWKEKYINRDYSKIFTENIVEQPCPDV FWFPI</p> <p>FSEKACDELVEEMEYHGKWSGGKHHDSRISGGYEN VPTDDIHMKQVDLENVWLHF</p> <p>IREFIAPVTLKVFAGYYTKG FALLNFVVKYSPERQ RSLRPHHDASTFTINIALNNVGE</p> <p>DF QGGGCKFLRYNCSIESPRKGWSFMHPGRLTHLHEGLPVKN GTRYIAVSFIDP</p> |
| <b>Sequence Similarities</b>    | Contains 1 Fe2OG dioxygenase domain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>GENE INFORMATION</b>         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Gene Name</b>                | PLOD2 procollagen-lysine, 2-oxoglutarate 5-dioxygenase 2 [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Official Symbol</b>          | PLOD2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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| <b>Synonyms</b>            | PLOD2; procollagen-lysine, 2-oxoglutarate 5-dioxygenase 2; procollagen lysine, 2 oxoglutarate 5 dioxygenase (lysine hydroxylase) 2; procollagen-lysine,2-oxoglutarate 5-dioxygenase 2; LH2; lysyl hydroxylase 2;                                                 |
| <b>Gene ID</b>             | <a href="#">5352</a>                                                                                                                                                                                                                                             |
| <b>mRNA Refseq</b>         | <a href="#">NM_000935</a>                                                                                                                                                                                                                                        |
| <b>Protein Refseq</b>      | <a href="#">NP_000926</a>                                                                                                                                                                                                                                        |
| <b>MIM</b>                 | <a href="#">601865</a>                                                                                                                                                                                                                                           |
| <b>Uniprot ID</b>          | <a href="#">O00469</a>                                                                                                                                                                                                                                           |
| <b>Chromosome Location</b> | 3q24                                                                                                                                                                                                                                                             |
| <b>Pathway</b>             | Lysine degradation, organism-specific biosystem; Lysine degradation, conserved biosystem;                                                                                                                                                                        |
| <b>Function</b>            | L-ascorbic acid binding; iron ion binding; metal ion binding; oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen, 2-oxoglutarate as one donor, and incorporation of one atom each of oxygen into both donors; |