

## Product datasheet for **RG212266**

### **PLOD2 (NM\_000935) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PLOD2 (NM_000935) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PLOD2
Synonyms:	BRKS2; LH2; TLH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide  
Sequence:

>RG212266 representing NM\_000935  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGGGGGGATGCACGGTGAAGCCTCAGCTGCTGCTCCTGGCGCTCGTCTCCACCCTGGAATCCCTGTC  
TGGGTGCGGACTCGGAGAAGCCCTCGAGCATCCCCACAGATAAAATTATTAGTCATAACTGTAGCAACAAA  
AGAAAGTGATGGATTCCATCGATTTATGCAGTCAGCCAAATATTTCAATTATACTGTGAAGTCCCTGGT  
CAAGGAGAAGAATGGAGAGGTGGTATGGAATTAATAGTATTGGAGGGGGCCAGAAAGTGAGATTAATGA  
AAGAAGTCATGGAACACTATGCTGATCAAGATGATCTGGTTGTCATGTTACTGAATGCTTTGATGTCAT  
ATTTGCTGGTGGTCCAGAAGAAGTTCTAAAAAATTCAAAAGGCCAAACCACAAAGTGGTCTTTGCAGCA  
GATGGAATTTTGTGGCCAGATAAAAGACTAGCAGACAAGTATCCTGTTGTGCACATTGGGAAACGCTATC  
TGAAATTCAGGAGGATTTATTGGCTATGCTCCATATGTCAACCGTATAGTTCAACAATGGAATCTCCAGGA  
TAATGATGATGATCAGCTCTTTTACACTAAAGTTTACATTGATCCACTGAAAAGGGAAGCTATTAACATC  
ACATTGGATCACAAATGCAAAATTTTCCAGACCTTAAATGGAGCTGTAGATGAAGTTGTTTTAAAAATTTG  
AAAATGGCAAAGCCAGAGCTAAGAATACATTTTATGAAACATTACCAGTGGAATTAATGAAAATGGACC  
CACCAAGATTCTCCTGAATTATTTTGGAAACTATGTACCCAATTCATGGACACAGGATAATGGTGCCT  
CTTTGTGAATTCGATACAGTCGACTTGTCTGCAGTAGATGTCCATCCAAACGATCAATAGGTGTTTTTA  
TTGAGCAACCAACCCCTTTTCTACCTCGGTTTCTGGACATATTGTTGACACTGGATTACCCAAAAGAAGC  
ACTTAACTTTTTATTATAACAAAGAAGTTTATCATGAAAAGGACATCAAGGTATTTTTTGATAAAGCT  
AAGCATGAAATCAAACCTATAAAAAATAGTAGGACCAGAAGAAAATCTAAGTCAAGCGGAAGCCAGAAACA  
TGGGAATGGACTTTTGGCGTCAGGATGAAAAGTGTGATTATTACTTTAGTGTGGATCGAGATGTTGTTTT  
GACAAATCCAAGGACTTTAAAAATTTTGATTGAACAAAACAGAAAGATCATTGCTCCTCTTGTAACCTCGT  
CATGAAAAGCTGTGGTCCAATTTCTGGGAGCATTGAGTCTGATGGATACTATGCACGATCTGAAGATT  
ATGTGGATATTGTTCAAGGGAATAGAGTAGGAGTATGGAATGTCCATATATGGTAATGTGACTTAAT  
TAAAGGAAAGACTCCGATCAGAGATGAATGAAAGGAATTTTTGTTTCGTGATAAAGTGGATCCTGAT  
ATGGCTCTTTGCCGAAATGCTAGAGAAATGGGTGATTTTATGTACATTTCTAATAGACATGAATTTGGAA  
GGCTATTATCCACTGCTAATTACAATACTTCCCATTATAACAATGACCTCTGGCAGATTTTTGAAAATCC  
TGTGGACTGGAAGGAAAAGTATAAACCCTGATTATTCAAAGATTTTCACTGAAAATATAGTTGAACAG  
CCCTGTCCAGATGCTTTTGGTCCCATATTTTCTGAAAAGCCTGTGATGAATTTGGTAGAAGAAATGG  
AACATTACGGCAAATGGTCTGGGGGAAAACATCATGATAGCCGTATATCTGGTGGTTATGAAAATGTCCC  
AACTGATGATATCCACATGAAGCAAGTTGATCTGGAGAATGTATGGCTTCATTTTATCCGGGAGTTCATT  
GCACCAGTTACACTGAAGGTCTTTGCAGGCTATTATACGAAGGGATTTGCACTACTGAATTTTGTAGTAA  
AATACTCCCTGAACGACAGCGTTCTTCTGCTCCTCATCATGATGCTTCTACATTTACCATAAACATTGC  
ACTTAATAACGTGGGAGAAGACTTTTCAGGGAGGTGGTTGCAAATTTCTAAGGTACAATTGCTCTATTGAG  
TCACCACGAAAAGGCTGGAGCTTCATGCATCCTGGGAGACTCACACATTTGCATGAAGGACTTCTGTTA  
AAAATGGAACAAGATACATTGCAGTGTCAATTTATAGATCCC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG212266 representing NM\_000935  
 Red=Cloning site Green=Tags(s)

MGGCTVKPQLLLALVLHPWNPCLGADSEKPSIPTDKLLVITVATKESDGFHRFMQSAKYFNVTVKVLG  
 QGEEWRGGDGINSIGGGQKVRMLKMEVMEHYADQDDLVMFTECFDVI FAGGPEEVLKKFQKANHKVVFAA  
 DGILWPKRLADKYPVVHIGKRYLNSGGFIGYAPYVNRIVQWNLQDNDDDQLFYTKVYIDPLKREAINI  
 TLDHKCKIFQTLNGAVDEVVLKFENGKARAKNTFYETLPVAINGNGPTKILLNYFGNYVPNSWTQDNGCT  
 LCEFDTVDLSAVDVHPNVSIGVFI EQPTPFLPRFLDILL TLDYPKEALKLFIHNKEVYHEKDIKVFFDKA  
 KHEIKTIKIVGPEENLSQAEARNMGMDFCRQDEKCDYFVSVDADVLTNPRTLKILIEQNRKIIAPLVTR  
 HGKLWSNFWGALSPDGYARSEDYVDIVQGNRVGVWNPYMANVYLKGGKTLRSEMNERNYFVRDKLDPD  
 MALCRNAREMGVFMYISNRHEFGRLSTANYNTSHYNNDLWQIFENPVDWKEKYINRDYSKIFTENIVEQ  
 PCPDVFWFPIFSEKACDELVEEMEHYKWSGGKHHDSRISGGYENVPTDDIHMKQVDLENVWLHFIREFI  
 APVTLKVFAGYYTKGFALLNFVVKYSPERQSLRPHHDASTFTINIALNNVGEDFQGGGCKFLRYNCSIE  
 SPRKGWSFMHPGRLTHLHEGLPVKNGTRYIAVSFIDP

TRTRPLE - GFP Tag - V

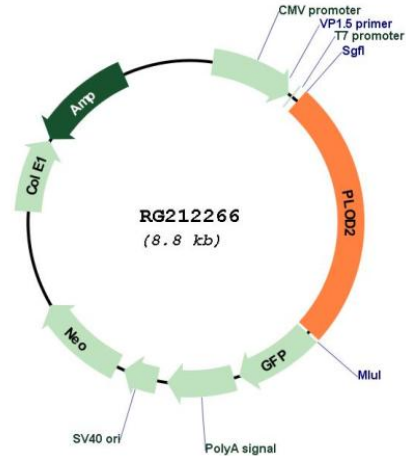
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



## Plasmid Map:



ACCN: NM\_000935

ORF Size: 2211 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM\\_000935.2](#), [NP\\_000926.2](#)

RefSeq Size: 4009 bp

RefSeq ORF: 2214 bp

Locus ID: 5352

UniProt ID: [O00469](#)

Cytogenetics: 3q24

Domains: 2OG-Fell\_Oxy, P4Hc

Protein Pathways: Lysine degradation

**Gene Summary:** 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]