

Product datasheet for **RC207610**

PLOD2 (NM_182943) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PLOD2 (NM_182943) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PLOD2
Synonyms:	BRKS2; LH2; TLH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC207610 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGGGGATGCACGGTGAAGCCTCAGCTGCTGCTCCTGGCGCTCGTCTCCACCCTGGAATCCCTGTC
 TGGGTGCGGACTCGGAGAAGCCCTCGAGCATCCCCACAGATAAAATTATTAGTCATAACTGTAGCAACAAA
 AGAAAGTGATGGATTCCATCGATTTATGCAGTCAGCCAAATATTTCAATTATACTGTGAAGTCTTGTT
 CAAGGAGAAGAATGGAGAGGTGGTATGGAATTAATAGTATTGGAGGGGGCCAGAAAGTGAGATTAATGA
 AAGAAGTCATGGAACACTATGCTGATCAAGATGATCTGGTTGTCATGTTACTGAATGCTTTGATGTCAT
 ATTTGCTGGTGGTCCAGAAGAAGTTCTAAAAAATTCAAAAGGCCAAACCACAAAGTGGTCTTTGCAGCA
 GATGGAATTTTGTGGCCAGATAAAAGACTAGCAGACAAGTATCCTGTTGTCACATTGGGAAACGCTATC
 TGAATTCAGGAGGATTTATTGGCTATGCTCCATATGTCAACCGTATAGTTCAACAATGGAATCTCCAGGA
 TAATGATGATGATCAGCTCTTTTACACTAAAGTTTACATTGATCCACTGAAAAGGGAAGCTATTAACATC
 ACATTGGATCACAAATGCAAAATTTTCCAGACCTTAAATGGAGCTGTAGATGAAGTTGTTTTAAAAATTTG
 AAAATGGCAAAGCCAGAGCTAAGAATACATTTTATGAAACATTACCAGTGGAATTAATGAAATGGACC
 CACCAAGATTCTCCTGAATTATTTTGGAAACTATGTACCCAATTCATGGACACAGGATAATGGTGCAC
 TTTTGTGAATTCGATACAGTCGACTTGTCTGCAGTAGATGTCCATCCAAACGATCAATAGGTGTTTTTA
 TTGAGCAACCAACCCCTTTTCTACCTCGGTTTCTGGACATATTGTTGACACTGGATTACCCAAAAGAAGC
 ACTTAACTTTTTATTTCATAACAAAGAAGTTTATCATGAAAAGGACATCAAGGTATTTTTTGATAAAGCT
 AAGCATGAAATCAAACATAAAAAATAGTAGGACCAGAAGAAAATCTAAGTCAAGCGGAAGCCAGAAACA
 TGGGAATGGACTTTTGGCGTCAGGATGAAAAGTGTGATTATTACTTTAGTGTGGATGCAGATGTTGTTTT
 GACAAATCCAAGGACTTTAAAAATTTTGATTGAACAAAACAGAAAGATCATTGCTCCTCTTGTAATCGT
 CATGGAAGCTGTGGTCCAATTTCTGGGGAGCATTGAGTCTGATGGATACTATGCACGATCTGAAGATT
 ATGTGGATATTGTTCAAGGGAATAGAGTAGGAGTATGGAATGTCCATATATGGTAATGTGTAATAAT
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 TGAAGGAAAAGTATATAAACCGTGATTATTCAAAGATTTTCACTGAAAATATAGTTGAACAGCCCTGTC
 CAGATGCTTTTTGGTTCCCATATTTTCTGAAAAGCCTGTGATGAATTGGTAGAAGAAATGGAACATTA
 CGGCAATGGTCTGGGGGAAAACATCATGATAGCCGTATATCTGGTGGTTATGAAAATGTCCCAACTGAT
 GATATCCACATGAAGCAAGTTGATCTGGAGAATGTATGGCTTCATTTTATCCGGGAGTTCATTGCACCAG
 TTACACTGAAGGTCTTTGCAGGCTATTATACGAAGGGATTTGCACTACTGAATTTGTAGTAAAATACTC
 CCCTGAACGACAGCGTCTCTTCGTCCTCATCATGATGCTTCTACATTTACCATAAACATTGCACTTAAT
 AACGTGGGAGAAGACTTTACGGGAGGTGGTTGCAAATTTCTAAGGTACAATTGCTCTATTGAGTCACCAC
 GAAAAGGCTGGAGCTTCATGCATCCTGGGAGACTCACACATTTGCATGAAGGACTTCTGTAAAAATGG
 AACAAGATACATTGCAGTGCATTTATAGATCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC207610 protein sequence
 Red=Cloning site Green=Tags(s)

MGGCTVKPQLLLLALVLHPWNPCLGADSEKPSIPTDKLLVITVATKESDGFHRFMQSAKYFNVTVKVLG
 QGEEWRGGDGINISGGGQKVRMLKEVMEHYADQDDLVMFTECFDVI FAGGPEEVLKKFQKANHKVVFAA
 DGILWPKRLADKYPVVHIGKRYLNSGGF IGYAPYVNRIVQQWNLQDNDLDFYTKVYIDPLKREAINI
 TLDHKCKIFQTLNGAVDEVVLKFENKARAKNTFYETLPVAINGNGPTKILLNYFGNYVPNSWTQDNGCT
 LCEFDTVDLSAVDVHPNVSIGVFI EQPTPFLPRFLDILL TLDYPKEALKLFIHNKEVYHEKDIKVFVFDKA
 KHEIKTIKIVGPEENLSQAEARNMGDMFCRQDEKCDYFVSDADVVL TNPRTLKILIEQNRKIIAPLVTR
 HGKLWSNFWGALSPDGYARSEYVDIVQGNRVGVWNPYMANVYLKGGKTLRSEMNERNYFVRDKLDPD
 MALCRNAREMTLQREKDSPTPETFQMLSPKGVFMYISNRHEFGRLSTANYNTSHYNNDLWQIFENPVD
 WKEYIINRDYSKIFTENIVEQPCPDVFWFPIFSEKACDELVEEMEYHGKWSGGKHHDSRISGGYENVPTD
 DIHMKQVDLENVWLHFIREFIAPVTLKVFAGYYTKGFALLNFVVKYSPERQSLRPHHDASTFTINIALN
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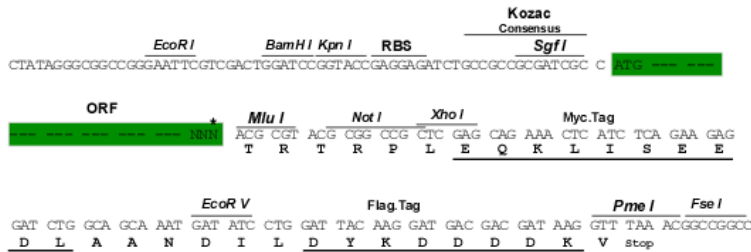
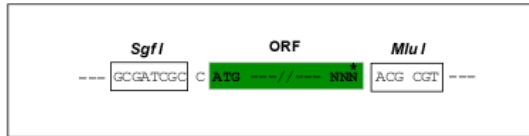
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6140_e10.zip

Restriction Sites: Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_182943

ORF Size: 2274 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_182943.3](#)

RefSeq Size: 4072 bp

RefSeq ORF: 2277 bp

Locus ID: 5352

UniProt ID: [O00469](#)

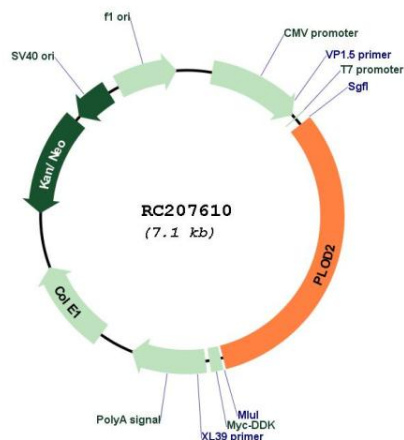
Cytogenetics: 3q24

Protein Pathways: Lysine degradation

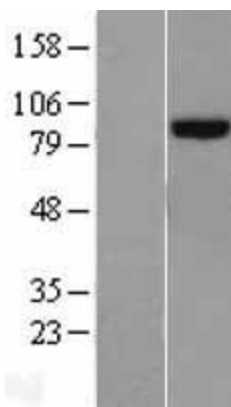
MW: 87.1 kDa

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]

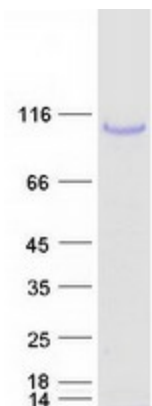
Product images:



Circular map for RC207610



Western blot validation of overexpression lysate (Cat# [LY403652]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207610 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PLOD2 protein (Cat# [TP307610]). The protein was produced from HEK293T cells transfected with PLOD2 cDNA clone (Cat# RC207610) using MegaTran 2.0 (Cat# [TT210002]).