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Product datasheet for SC304927

PRODH2 (NM_021232) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PRODH2 (NM_021232) Human Untagged Clone
Tag:	Tag Free
Symbol:	PRODH2
Synonyms:	HSPOX1; HYPDH
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

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Fully Sequenced ORF:

>OriGene sequence for NM_021232 edited
TAGAGATGGGGTCTCACTATGTCGCCCAGGGTAGTCTCAAACTCCTCGGTCTTGGCCTCC
CAAAGTGTTGGGATTACAAACGTGAGAACCGTATTTTCAAATGTATTCAATAACACTACA
GCGTTTCCAATTTTAAGAGGAAGCAATTGCCACAAAATCACTGCCCCTGGTCTGGGCAAG
GGGCAGTTGGTGAACTTGCTGCCTCCAGAGAACCTTCCCTGGTGTGGAGGCAGCCAGGGA
CCCAGGATGCTCCGGACCTGTTACGTGCTCTGTTCCCAAGCTGGTCCCCCCTCCAGGGGC
TGGCAGTCCCTGAGCTTTGATGGCGGGGCCTTCCACCTTAAGGGCACAGGAGAGCTGACA
CGGGCCTTGCTGGTTCTCCGGCTGTGTGCCTGGCCCCCACTCGTCACTCACGGGCTGTTG
CTCCAGGCCTGGTCTCGGCGACTCCTGGGCTCCCGGCTCTCAGGCGCATTTCTCCGAGCA
TCCGTCTATGGGCAGTTTGTGGCTGGTGAGACAGCAGAGGAGGTGAAGGGCTGCGTGCAG
CAGCTGCGGACCCTCAGCCTCCGACCACTGCTGGCAGTGCCCACTGAGGAGGAGCCGGAC
TCTGCTGCCAAGAGTGGTGAGGCGTGGTATGAGGGGAACCTCGGTGCTATGCTGCGGTGT
GTGGACCTGTCACGGGGCCTCCTGGAGCCCCCCAGCCTGGCTGAGGCCAGCCTCATGCAG
CTGAAGGTGACGGCGCTGACCAGTACTCGGCTCTGTAAGGAGCTAGCCTCGTGGGTCAGA
AGGCCGGGAGCCTCCTTGGAGCTGAGCCCCGAGAGGCTGGCTGAAGCTATGGACTCTGGG
CAGAACCTCCAGGTCTCCTGCCTCAATGCTGAGCAGAACCAGCACCTCCGGGCCTCCCTC
AGCCGCCTGCATCGGGTGGCACAGTATGCCCGGGCCCAGCACGTGCGGCTCCTGGTGGAT
GCGGAGTACACCTCACTGAACCCTGCGCTCTCGCTGCTGGTGGCTGCCCTGGCTGTGCGC
TGGAACAGCCCGGGTGAAGGCGGGCCCTGGGTGTGGAACACCTACCAGGCCTGTCTAAAG
GACACATTCGAGCGGCTGGGGAGGGATGCAGAGGCTGCGCACAGGGCCGGCCTGGCCTTC
GGAGTGAAGCTGGTACGAGGTGCATATCTGGACAAGGAGAGAGCGGTGGCCCAGCTCCAT
GGGATGGAAGACCCCACTCAGCCTGACTATGAGGCCACCAGTCAGAGTTACAGCCGCTGC
CTGGAACTGATGCTGACGCACGTGGCCCGCCATGGCCCCATGTGCCACCTCATGGTGGCT
TCCCACAATGAGGAATCTGTTCGCCAGGCAACCAAGCGCATGTGGGAGCTGGGCATTCCT
CTGGATGGGACTGTCTGTTTCGGACAACTTCTGGGCATGTGTGACCACGTCTCTCTAGCA
CTGGGGCAGGCCGGCTATGTAGTGTATAAGTCCATTCCCTATGGCTCCTTGGAGGAGGTA
ATCCCCTACCTGATCCGGAGGGCCCAGGAGAACCGGAGCGTGCTTCAGGGTGCCCGCAGG
GAACAGGAGCTGCTCAGCCAAGAACTGTGGCGGCGGCTGCTGCCAGGATGCCGAAGGATA
CCCCACTAGCACCCCTGAGGGGGTCATGTGGTCAATAAA

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_021232 unedited
AGTTAAATTTGTATACCATCATATAGGCGGCCGCGNATTCGCCCTTCTCACTATGTCGCC
CAGGTAGTCTCAAACTCCTCGGTCTTGGCCTCCCAAATGTTGGGATTACAAACGTGAGAA
CCGTATTTTCAAATGTATTCAATAACACTACAGCGTTTCCAATTTTAAGAGGAAGCAATT
GCCACAAAATCACTGCCCCTGGTCTGGGCAAGGGGCAGTTGGTGAACTTGCTGCCTCCAG
AGAACCTTCCCTGGTGTGGAGGCAGCCAGGGACCCAGGATGCTCCGGACCTGTTACGTGC
TCTGTTCCCAAGCTGGTCCCCCCTCCAGGGGCTGGCAGTCCCTGAGCTTTGATGGCGGGG
CCTTCCACCTTAAGGGCACAGGAGAGCTGACACGGGCCTTGCTGGTTCTCCGGCTGTGTG
CCTGGCCCCCACTCGTCACTCACGGGCTGTTGCTCCAGGCCTGGTCTCGGCGACTCCTGN
GCTCCCGGCTCTCAGGCGCATTTCTCCGAGCATCCGTCTATGGGCAGTTTGTGGCTGGTG
AGACAGCAGAGGAGGTGAAGGGCTGCGTGCAGCAGCTGCGGACCCTCAGCCTCCGACCAC
TGCTGGCAGTGCCCACTGAGGAGGAGCCGGACTCTGCTGCCAAGAGTGGTGAGGCGTGGT
ATGAGGGGAACCTCGGTGCTATGCTGCGGTGTGTGGACCTGTCACGGGGCCTCCTGGAGC
CCCCCAGCCTGGCTGANGCCAGCCTCATGCAGCTGAAGGTGACGGCGCTGACCAGTACTC
GGCTCTGTAAGGAGCTAGCCTCGTGGGTCAGAAGGCCGGGAGCC

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_021232 unedited
CCCACCTAGGNNGATGGCACTTNCCAGGNCCAGNAAAGCACTGGGGNAGGGTCACAGGNT
GCCACCCGGGATCTGTTCAGGAAACAGCTATGACCGCGGCCGCAATCTAGAGTCGACAAG
CTTGATATCGGTACCAGATCTGAATTCGCCCTTTATTGACCACATGACCCCCTCAGGGGT
GCTAGTGGGGTATCCTTCGGCATCCTGGCAGCAGCCGCCGCCACAGTTCTTGGCTGAGCA
GCTCCTGTTCCCTGCGGGCACCCTGAAGCACGCTCCGGTTCTCCTGGGCCCTCCGGATCA
GGTAGGGGATTACCTCCTCCAAGGAGCCATAGGGAATGGACTTATACACTACATAGCCGG
CCTGCCCCAGTGCTAGAGAGACGTGGTCACACATGCCCAGAAGTTGTCCGAAACAGACAG
TCCCATCCAGAGGAATGCCCAGCTCCCACATGCGCTTGGTTGCCTGGCGAACAGATTCCT
CATTGTGGGAAGCCACCATGAGGTGGCACATGGGGCCATGGCGGGCCACGTGCGTCAGCA
TCAGTTCCAGGCAGCGGCTGTAACTCTGACTGGTGGCCTCATAGTCAGGCTGAGTGGGGT
CTTCCATCCCATGGAGCTGGGCCACCGCTCTCTCCTTGTCCAGATATGCACCTCGTACCA
GCTTCACTCCGAAGGCCAGGCCGGCCCTGTGCGCAGCCTCTGCATCCCTCCCCAGCCGCT
CGAATGTGTCCTTTAGACAGGCCTGGTAGGTGTTCCACACCCAGGGCCCGCCTTCACCCG
GGCTGTTCCAGCGCACAGCCAGGGCAGCCACCAGCAGCGAGAGCGCAGGT

Restriction Sites: Please inquire

ACCN: NM_021232

Insert Size: 1700 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: The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.

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_021232.1, NP_067055.1

RefSeq Size:	1677 bp
RefSeq ORF:	1611 bp
Locus ID:	58510
UniProt ID:	Q9UF12
Cytogenetics:	19q13.12
Protein Pathways:	Arginine and proline metabolism, Metabolic pathways
Gene Summary:	The protein encoded by this gene catalyzes the first step in the catabolism of trans-4-hydroxy-L-proline, an amino acid derivative obtained through food intake and collagen turnover. One of the downstream products of this catabolism is glyoxylate, which in people with disorders of glyoxalate metabolism can lead to an increase in oxalate levels and the formation of calcium-oxalate kidney stones. Therefore, this gene may serve as a therapeutic target against primary hyperoxalurias (PH). This gene is similar to proline dehydrogenase (oxidase) 1, a mitochondrial enzyme that catalyzes the first step in proline catabolism. [provided by RefSeq, Jan 2017]