

## Product datasheet for **RC228922**

### **DHCR7 (NM\_001163817) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	DHCR7 (NM_001163817) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DHCR7
Synonyms:	SLOS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC228922 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCTGCAAAATCGCAACCCAACATTCCAAAGCCAAGAGTCTAGATGGCGTCACCAATGACAGAACCG  
 CATCTCAAGGGCAGTGGGGCCGTGCCTGGGAGGTGGACTGGTTTTCACTGGCGAGCGTCATCTTCTACT  
 GCTGTTCCGCCCTTCATCGTCTACTACTTCATCATGGCTTGTGACCAAGTACAGCTGCGCCCTGACCGGC  
 CCTGTGGTGGACATCGTCACTGGACATGCTCGGCTCTCGGACATCTGGGCAAGACTCCACCTATAACGA  
 GGAAAGCCGCCAGCTCTATACCTGTGGGTACCTTCCAGGTGCTTCTGTACACGTCTCTCCCTGACTT  
 CTGCCATAAGTTTCTACCCGGCTACGTAGGAGGCATCCAGGAGGGGGCCGTGACTCCTGCAGGGTGTG  
 AACAGTATCAGATCAACGGCTGCAAGCCTGGCTCCTCACGCACCTGCTCTGGTTTGCAAACGCTCATC  
 TCCTGCTCTGGTCTCGCCACCATCATCTTCGACAACCTGGATCCCACTGCTGTGGTGCAGCAACATCCT  
 TGGCTATGCCGTCTCCACCTTCGCCATGGTCAAGGGCTACTTCTCCCCACCAGCGCCAGAGACTGCAAA  
 TTCACAGCAATTTCTTTTACAACCTACATGATGGGCATCGAGTTTAAACCTCGGATCGGGAAGTGGTTTG  
 ACTTCAAGCTGTTCTTCAATGGGCGCCCGGGATCGTCGCCTGGACCCTCATCAACCTGTCTTCGCAGC  
 GAAGCAGCGGGAGCTCCACAGCCATGTGACCAATGCCATGGTCTGGTCAACGTCTGCAGGCCATCTAC  
 GTGATTGACTTCTTCTGGAACGAAACCTGGTACCTGAAGACCATGACATCTGCCATGACCACTTCGGGT  
 GGTACCTGGGCTGGGGCGACTGTGTCTGGCTGCCTTATCTTTACACGCTGCAGGGTCTGTACTTGGTGTA  
 CCACCCCGTGCAGCTGTCCACCCCGCACGCCGTGGGCGTCTGCTGCTGGGCTGGTGGGCTACTACATC  
 TTCCGGGTGGCAACCAACAGAGGACCTGTTCCGCGCACGGATGGGCGCTGCCTCATCTGGGGCAGGA  
 AGCCCAAGGTCAATCGAGTCTCTACACATCCGCGCAGGGCAGAGGCACCACAGCAAGTCTGTGGTGC  
 GGGCTTCTGGGGCGTGGCCCGCACTTCAACTAGCTCGGCGACCTGATGGGCGACCTGGCTACTGCCTG  
 GCCTGTGGCGGGCCACCTGCTGCCCTACTTCTACATCATCTACATGGCCATCCTGCTGACCCACCGCT  
 GCCTCCGGGACGAGCACCCTGCGCCAGCAAGTACGGCCGGGACTGGGAGCGCTACACCGCCGAGTGCC  
 TTACCGCTGCTGCCTGGAATCTTC

**ACGGTACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA**

**Protein Sequence:**

>RC228922 protein sequence  
 Red=Cloning site Green=Tags(s)

MAAKSQPNIPKAKSLDGVTNDRTASQQWGRAWEVDWFLASVIFLLLFAPFIVYFIMACDQYSCALTG  
 PVVDIVTGHARLSDIWAKTPPIRKAALYTLWVTFQVLLYTSPLPDFCHKFLPGYVGGIIEGAVTPAGVV  
 NKYQINGLQAWLLTHLLWFANAHLISWFSPTIIFDNWIPLLWCANILGYAVSTFAMVKGYFFPTSARDCK  
 FTGNFFYNYMMGIEFNPRIGKWFDFKLFNRPVIGVAVTLINLSFAAKQRELHSHVTNAMVLVNVLQAIY  
 VIDFFWNETWYLKTIIDHDFGWYLGWDCVWLPYLYTLQGLYLVYHPVQLSTPHAVGVLLGLVGYI  
 FRVANHQDLFRRTDGRCLIWGRPKVIECSYTSADGQRHHSKLLVSGFWGVARHFNYVDLMLGSLAYCL  
 ACGGGHLLPYFYIYMAILLTHRCLRDEHRCASKYGRDWERYTAAPYRLLPGIF

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6081\\_c06.zip](https://cdn.origene.com/chromatograms/mk6081_c06.zip)

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001163817

**ORF Size:** 1425 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\\_001163817.1](#), [NP\\_001157289.1](#)

**RefSeq Size:** 2642 bp

**RefSeq ORF:** 1428 bp

**Locus ID:** 1717

**UniProt ID:** [Q9UBM7](#)

**Cytogenetics:** 11q13.4

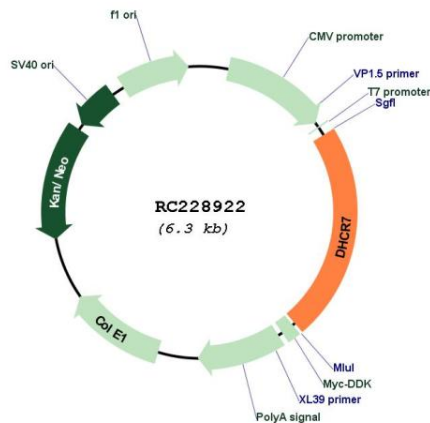
**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Metabolic pathways, Steroid biosynthesis

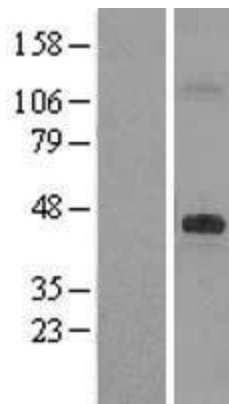
**MW:** 54.5 kDa

**Gene Summary:** This gene encodes an enzyme that removes the C(7-8) double bond in the B ring of sterols and catalyzes the conversion of 7-dehydrocholesterol to cholesterol. This gene is ubiquitously expressed and its transmembrane protein localizes to the endoplasmic reticulum membrane and nuclear outer membrane. Mutations in this gene cause Smith-Lemli-Opitz syndrome (SLOS); a syndrome that is metabolically characterized by reduced serum cholesterol levels and elevated serum 7-dehydrocholesterol levels and phenotypically characterized by cognitive disability, facial dysmorphism, syndactyly of second and third toes, and holoprosencephaly in severe cases to minimal physical abnormalities and near-normal intelligence in mild cases. Alternative splicing results in multiple transcript variants that encode the same protein.[provided by RefSeq, Aug 2009]

**Product images:**



Circular map for RC228922



Western blot validation of overexpression lysate (Cat# [LY431950]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC228922 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).