

## Product datasheet for **RC200967**

### **DHTKD1 (NM\_018706) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	DHTKD1 (NM_018706) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DHTKD1
Synonyms:	AAKAD; AMOXAD; CMT2Q
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC200967 representing NM\_018706  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCTCTGCTACTGCGGCAGCAGCACGACGGGGCCTCGGCCGGGCTCTCCCTCTCCTCTGGCGTGGCT  
 ACCAGACCGAGCGGGGCGTTTACGGCTACCGGCCGAGGAAGCCCGAGAGCCGCGAGCCCCAGGGCGCCCT  
 GGAGCGCCCCCAGTTGATCATGGCCTTCCAGGTTGGTGACAGTATATTGTGAGCATGGTCATAAAGCT  
 GCCAAAATCAACCCCTCTTACCGGACAAGCCCTGCTGGAGAATGTGCCTGAAATCCAAGCCCTGGTGC  
 AGACACTGCAGGGACCCTCCACACGGCAGGATTATTGAACATGGGGAAGGAAGAGGCTCACTTGAGGA  
 AGTGTAGTCTATCTCAATCAAATCTACTGTGGGCAGATTTCTATTGAAACCTCCCACTCAGAGCCAG  
 GATGAGAAAGACTGGTTTGCCAAGCGTTTGGGAACTGCAAAGGAGACGTTTACCACAGAAGAGCGAA  
 AACATCTGTGAAACTAATGCTGGAATCTCAGGAGTTTACCACCTTTCTGGCCACCAAGTTCTCGACAGT  
 GAAGCGATATGGAGGCGAAGGGCTGAAAGCATGATGGGCTTTTTCCACGAGCTGCTGAAATGTGCGCC  
 TACAGCGGGATCACTGATGTCATTATTGGGATGCCCATAGAGGGAGGCTGAATTTATTGACAGGCCTTC  
 TGCACTTCCCTCCAGAGCTGATGTTCCGTAATAATGCGAGGCTTAAGTGAATTTCCAGAGAATTTCTCAGC  
 CACTGGAGACGTCTGTCTCACCTGACCTCCTCTGTGGACCTGGACTTTGGGGCGCACCATCCCCTCCAT  
 GTGACAAATGTTGCCAAATCCCTCGCACCTGGAGGCCGTCAACCCCGTGGCCGTGGGCAAACTCGCGGCA  
 GGCAGCAGTCTCTCAAGACGGCATTACTCTCCAGACAACCTCAGCCAGCCGGGGGACAGGGTCATTTG  
 CTTACAGTCCATGGTGTGCTTCTTCTGTGGTCAAGGATTGTTCTGAAACATTACAGCTGTCCAAT  
 CTCCCACATTTAGAATTGGTGGGAGTGTGATTTGATTGTTAATAACCAGCTGGGTTACACCACCTCCAG  
 CTGAAAGAGGAAGGTCTCTTTATACTGCATGATATTGGGAAGCTTGTGGGCTGTGCCATCATCCATGTC  
 CAATGGAGACAGCCAGAGGAAGTGGTCCGTGCCACACGACTGGCTTTTGAATACCAACGCCAGTCCCGC  
 AAGGATGTGATTATTGATCTGTTGTGCTACAGGACGTGGGGCCACAATGAGCTGGATGAGCCATTCTACA  
 CCAACCCCATCATGTACAAAATCATCAGAGCTCGAAAGAGCATTCCAGACACATATGCAGAGCACCTCAT  
 TGCTGGCGGACTCATGACGCAGGAGGAGGTGTCTGAAATAAAATCCTCCTACTATGCCAAGTTGAATGAT  
 CACTTAAATAACATGGCCACTACAGGCCCTGCCCTGAACCTGCAGGCCACTGGCAGGGCCTGGCTC  
 AGCCAGAAGCGCAAAATCACACCTGGAGTACAGGTGTGCCCTCGACCTCCTGCGGTTTGTGGCATGAA  
 GTCTGTAGAGGTGCCAAGAGAGCTGCAGATGCACAGTCACTGCTGAAGACACATGTTCACTCCAGAAATG  
 GAGAAGATGATGGACGGAATCAAGCTAGACTGGGCCACCGCGGAAGCTCTTGCTTGGGTTCTTTACTTG  
 CTAAGGTTTTAATGTTGCTCTAAGTGGCAAGATGTTGGTCTGGAACCTTCAGTCAGAGGCATGCAAT  
 GGTGGTTTGGCAGGAGACGGATGACACCTACATCCCCCTGAACCATATGGACCCAAATCAGAAGGGGTTT  
 CTAGAGGTGAGCAACAGCCCCCTGTGAGAAGAGGCCGTCTGGGATTGCAATATGGGATGAGCATTGAGA  
 GCCCAAAGTTACTGCCCTGTGGGAGGCACAGTTTGGCGATTTCTTCAATGGTGGCCAGATCATCTTTGA  
 CACATTCATCTCTGGAGGAGAGGCCAAGTGGCTCCTACAAAGCGGCATTGTCATCCTCCTCCACATGGC  
 TACGATGGGGCTGGGCCAGACACTCATCCTGTGCAATAGAGCGTTTCTGCAGATGTGTGACAGTGGG  
 AAGAGGGGTGGACGGAGACACTGTGAACATGTTTGGTTCACCAACAACCTCTGCACAGTATTTCCA  
 CTTGCTTAGGAGACAGATGGTCCGGAATTCAGAAAACCACTATTGTTGCTTCCCCTAAGATGTTACTC  
 AGGCTCCCGGACCGCTGTCAACTCTTCAAGAAATGGCACCAGGAACAACATTTAACCCGTCATTGGTG  
 ATTCATCTGTGGATCCAAAAAGGTTAAGACCCTCGTGTCTGCTCCGGCAAACATTTCTACTCCCTGGT  
 GAAACAAAGAGAAATCTCTGGGGCCAAGAAGCATGACTTTGCCATCATCCGAGTAGAGGAACTCTGCCCC  
 TTCCCGTTGGATTCTTTACAGCAAGAGATGAGCAAATACAAACATGTTAAAGATCATATTTGGAGTCAGG  
 AGGAACCTCAGAACATGGGTCCGTGGTCTGTTTCTTCCAAAGTTTAAAAGCAGCTGGCCTGCAAGCT  
 CCGTCTGGTGGGCCGGCCCCCTTGGCAGTACCCGCTGTAGGAATTGGCACAGTTCACTTGACACAGCAT  
 GAAGATATCCTCGCCAAGACCTTCGCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGAT AAGGTTTAA

**Protein Sequence:** >RC200967 representing NM\_018706  
 Red=Cloning site Green=Tags(s)

MASATAAAARRGLGRALPLLWRGYQTERGVYGYRPRKPESREPQGALERPPVDHGLARLVTVYCEHGHA  
 AKINPLFTGQALLENVPEIQALVQTLQGPFHAGLLNMGKEEASLEEVLYVLNQIYCGQISIETSQSQ  
 DEKDFWAKRFEELQKETFTEERKHL SKLMLESQEFDFHFLATKFSVKRYGGEGAESMMGFFHELLKMSA  
 YSGITDVIIGMPHRGRLNLLTGLLQFPPELMFRKMRGLSEFPENFSATGDVLSHLTSSVDLDFGAHPLH  
 VTMLPNPSHLEAVNPVAVGKTRGRQSLQDGDYSPDNSAQPGRVICLQVHGDAFCGQGIYPETFTLSN  
 LPHFRIGGSVHLIVNNQLGYTTPAERGRSSLYCSDIGKLVGCAIIHVNGDSPEEVVVRATRLAFEYQRQFR  
 KDVIIDLLCYRQWGHNELDEPFYTNPIYKIIIRARKSIPDTYAEHLIAGGLMTQEEVSEIKSSYYAKLND  
 HLNMAHYRPPALNLQAHWQGLAQPEAQITTWSTGVPLDLLRFVGMKSVEVPRELQMHSHLLKTHVQSRM  
 EKMMDGIKLDWATAEALALGSLAQGFNVRLSGQDVGRGTFSSQRHAMVVCQETDDTYIPLNHMDPNQKGF  
 LEVSN SPLSEEAVLGFYGM SIESPKLLPLWEAQFGDFNGAQIIFDTFISGGEAKWLLQSGIVILLPHG  
 YDGAGPDHSSCRIERFLQMCDSAEEGVDGDTVNMFVVHPTTPAQYFHLRRQMVRNFRKPLIVASPKMLL  
 RLPAAVSTLQEMAPGTTFNPIVIGDSSVDPKKVKTLVFCSGKHFYSLVKQRESLGAKKHDFAIIRVEELCP  
 FPLDSLQEMSKYKHVKDHIWSQEEPQNMGPWSFVSPRFEKQLACKLRLVGRPPLPVPVAVGIGTVHLHQH  
 EDILAKTFA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg4937\\_e01.zip](https://cdn.origene.com/chromatograms/mg4937_e01.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



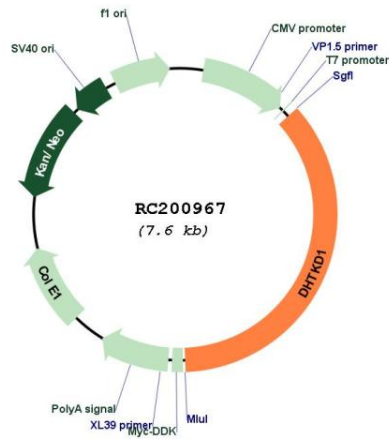
\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_018706

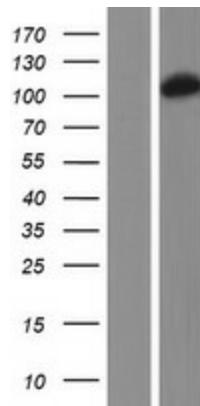
**ORF Size:** 2757 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_018706.1</a>
<b>RefSeq Size:</b>	5162 bp
<b>RefSeq ORF:</b>	2760 bp
<b>Locus ID:</b>	55526
<b>UniProt ID:</b>	<a href="#">Q96HY7</a>
<b>Cytogenetics:</b>	10p14
<b>Domains:</b>	E1_dehydrog, transket_pyr
<b>MW:</b>	102.9 kDa
<b>Gene Summary:</b>	This gene encodes a component of a mitochondrial 2-oxoglutarate-dehydrogenase-complex-like protein involved in the degradation pathways of several amino acids, including lysine. Mutations in this gene are associated with 2-aminoadipic 2-oxoadipic aciduria and Charcot-Marie-Tooth Disease Type 2Q. [provided by RefSeq, May 2013]

Product images:



Circular map for RC200967



Western blot validation of overexpression lysate (Cat# [LY412899]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200967 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).