

## Product datasheet for **RC210586**

### **BDH2 (NM\_020139) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	BDH2 (NM_020139) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BDH2
Synonyms:	DHRS6; EFA6R; PRO20933; SDR15C1; UCPA-OR; UNQ6308
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210586 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGTCGACTTGATGGGAAAGTCATCATCCTGACGGCCGCTGCTCAGGGGATTGGCCAAGCAGCTGCCT  
TAGCTTTTGCAAGAGAAGGTGCCAAAGTCATAGCCACAGACATTAATGAGTCCAAACTTCAGGAAGTGA  
AAAGTACCGGGTATTCAAACCTCGTGCCTTGATGTCACAAAGAAGAAACAAATTGATCAGTTTGCCAA  
GAAGTTGAGAGACTTGATGTTCTCTTAAATGTTGCTGGTTTTGTCCATCATGGAAGTGCCTGGATTGTG  
AGGAGAAAGACTGGGACTTCTCGATGAATCTCAATGTGCGCAGCATGTACCTGATGATCAAGGCATTCTCT  
TCCTAAAATGCTTGCTCAGAAATCTGGCAATATTCAACATGTCTTCTGTGGCTTCCAGCGTCAAAGGA  
GTTGTGAACAGATGTGTGTACAGCACAACCAAGGCAGCCGTGATTGGCCTCACAAAATCTGTGGCTGCAG  
ATTTTATCCAGCAGGGCATCAGGTGCAACTGTGTGTGCCAGGAACAGTTGATACGCCATCTCTACAAGA  
AAGAATACAAGCCAGAGGAAATCCTGAAGAGGCACGGAATGATTTCTGAAGAGACAAAAGCAGGGAAGA  
TTCGCAACTGCAGAAGAAATAGCCATGCTCTGCGTGTATTTGGCTTCTGATGAATCTACTTATGTAAC  
GTAACCTGTATCATTGATGGAGGCTGGAGCTTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC210586 protein sequence  
Red=Cloning site Green=Tags(s)

MGRLDGKVIILTAAAQGIGQAAALAFAREGAKVIATDINESKLQELEKYPGIQTRVLDVTKKKQIDQFAN  
 EVERLDVLFNVAGFVHHGTVLDCEEKDWDFSMNLNVRSMYLMIKAF LPKMLAQKSGNIINMSSVASSVKG  
 VVNRCVYSTTKAAVIGLTKSVAADFIQQGIRNCVCPTGVDTPSLQERIQARGNPEEARNDFLKRQKTGR  
 FATAEEIAMLCVYLASDESTYVTGNPVIIDGGWSL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6093\\_c10.zip](https://cdn.origene.com/chromatograms/mk6093_c10.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\_020139

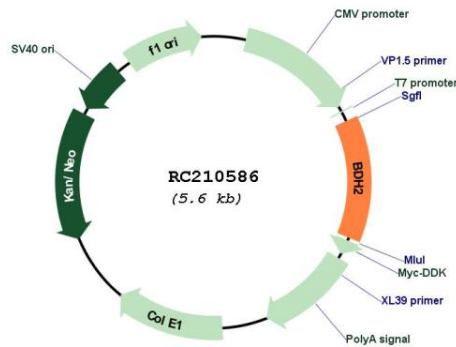
**ORF Size:** 735 bp

**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](#)

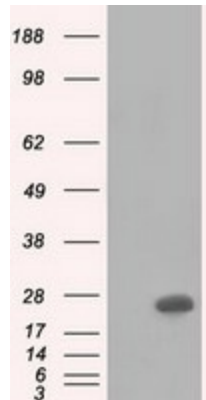
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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).

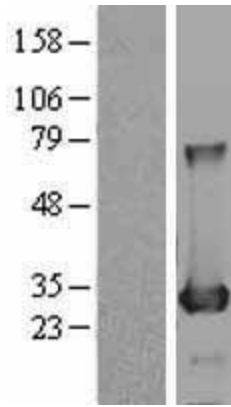
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and 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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_020139.4</a>
<b>RefSeq Size:</b>	2936 bp
<b>RefSeq ORF:</b>	738 bp
<b>Locus ID:</b>	56898
<b>UniProt ID:</b>	<a href="#">Q9BUT1</a>
<b>Cytogenetics:</b>	4q24
<b>Domains:</b>	adh_short
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Butanoate metabolism, Metabolic pathways, Synthesis and degradation of ketone bodies
<b>MW:</b>	26.8 kDa
<b>Gene Summary:</b>	Dehydrogenase that mediates the formation of 2,5-dihydroxybenzoic acid (2,5-DHBA), a siderophore that shares structural similarities with bacterial enterobactin and associates with LCN2, thereby playing a key role in iron assimilation and homeostasis. Plays a role in susceptibility to bacterial infection by providing an assimilable source of iron that is exploited by pathogenic bacteria (By similarity). Also acts as a 3-hydroxybutyrate dehydrogenase (PubMed:16380372).[UniProtKB/Swiss-Prot Function]

**Product images:**


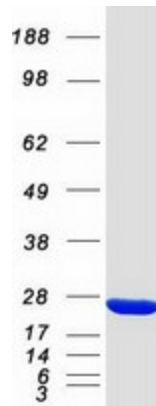
Circular map for RC210586



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY BDH2 (Cat# RC210586, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-BDH2 (Cat# [TA501291]). Positive lysates [LY402755] (100ug) and [LC402755] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY402755]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210586 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified BDH2 protein (Cat# [TP310586]). The protein was produced from HEK293T cells transfected with BDH2 cDNA clone (Cat# RC210586) using MegaTran 2.0 (Cat# [TT210002]).