

## Product datasheet for RC219591

### BDH1 (NM\_004051) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	BDH1 (NM_004051) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BDH1
Synonyms:	BDH; SDR9C1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC219591 representing NM_004051 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTGGCCACCCGCTCTCCAGACCCCTGTCACGGCTCCAGGAAAAACCCTAAGTGCCTGTGATAGAG  
AAAATGGAGCAAGACGCCCACTATTGCTTGGTTCTACTTCCTTTATCCCGATTGGCCGTCGGACTTATGC  
CAGTGGCGGAGCCGGTTGGCAGCAAAGCTGTCCTGGTCACAGGCTGTGACTCTGGATTGGGTTCTCA  
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CGAAGAGGTGGAGAAAGTGGTGGAGATTGTCCGCTCGAGCCTGAAGGACCCTGAGAAAGGCATGTGGGGC  
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TGGCAGAAGTGAACCTTTGGGGCACAGTGGGATGACGAAATCCTTTCTCCCCCTCATCCGAAGGGCCAA  
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CAAGAAGATGTGGAGGAGCTGCCTGAGGTCGTGCGCAAGGACTACGGCAAGAAGTACTTTGATGAAAAG  
ATCGCCAAGATGGAGACCTACTGCAGCAGTGGTCCACAGACAGTCCCCTGTCATCGATGCTGTACAC  
ACGCCCTGACCGCCACCACCCCTACACCCGCTACCACCCATGGACTACTGTTGGTGGCAGCAATGCA  
GATCATGACCCACTTGCCTGGAGCCATCTCCGACATGATCTACATCCGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC219591 representing NM\_004051  
Red=Cloning site Green=Tags(s)

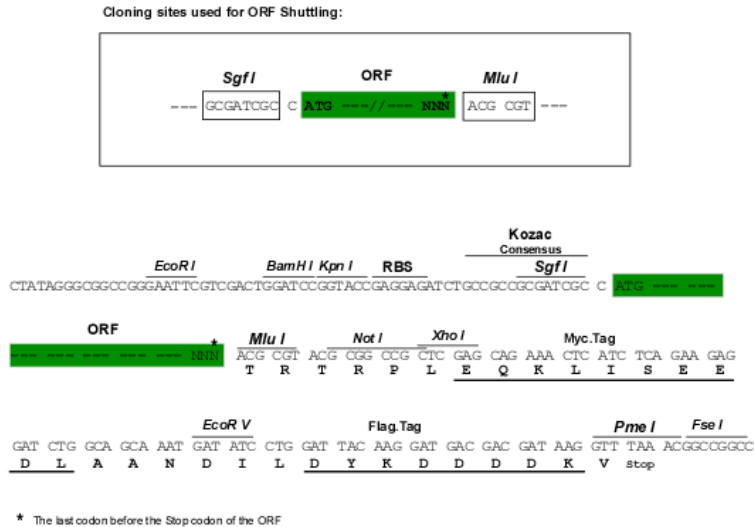
MLATRLSRPLSRLPGKTL S ACDRENGARRPLLLGSTSFIPIGRRTYASAAEPVGSKAVLVTGCDSGFGFS  
 LAKHLHSKGF L V F V G C L M K D K G H D G V K E L D S L N S D R L R T V Q L N V C S S E E V E K V V E I V R S S L K D P E K G M W G  
 L V N N A G I S T F G E V E F T S L E T Y K Q V A E V N L W G T V R M T K S F L P L I R R A K G R V V N I S S M L G R M A N P A R S P Y C I  
 T K F G V E A F S D C L R Y E M Y P L G V K V S V V E P G N F I A A T S L Y S P E S I Q A I A K K M W E E L P E V V R K D Y G K K Y F D E K  
 I A K M E T Y C S S G S T D T S P V I D A V T H A L T A T P Y T R Y H P M D Y Y W W L R M Q I M T H L P G A I S D M I Y I R

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6821\\_g02.zip](https://cdn.origene.com/chromatograms/mk6821_g02.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_004051

**ORF Size:** 1029 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\\_004051.5](#)

**RefSeq Size:** 1621 bp

**RefSeq ORF:** 1032 bp

**Locus ID:** 622

**UniProt ID:** [Q02338](#)

**Cytogenetics:** 3q29

**Domains:** adh\_short

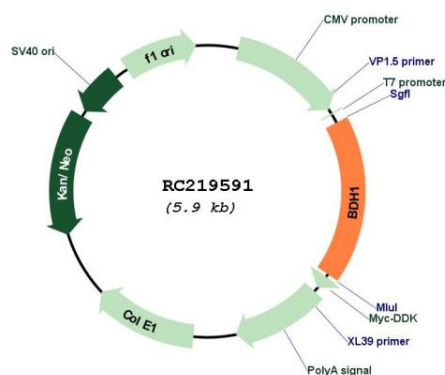
**Protein Families:** Druggable Genome

**Protein Pathways:** Butanoate metabolism, Metabolic pathways, Synthesis and degradation of ketone bodies

**MW:** 38.19 kDa

**Gene Summary:** This gene encodes a member of the short-chain dehydrogenase/reductase gene family. The encoded protein forms a homotetrameric lipid-requiring enzyme of the mitochondrial membrane and has a specific requirement for phosphatidylcholine for optimal enzymatic activity. The encoded protein catalyzes the interconversion of acetoacetate and (R)-3-hydroxybutyrate, the two major ketone bodies produced during fatty acid catabolism. Alternatively spliced transcript variants encoding the same protein have been described. [provided by RefSeq, Jul 2008]

## Product images:



Circular map for RC219591