

## Product datasheet for **RC201152**

### **IDH2 (NM\_002168) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	IDH2 (NM_002168) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	IDH2
Synonyms:	D2HGA2; ICD-M; IDH; IDHM; IDP; IDPM; mNADP-IDH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC201152 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCGGCTACCTGCGGGTCTGCGCTCGCTCTGCAGAGCCTCAGGCTCGCGGCCGGCCTGGGCGCCGG  
 CGGCCCTGACAGCCCCACCTCGCAAGAGCAGCCGCGGCCCACTATGCCGACAAAAGGATCAAGGTGGC  
 GAAGCCCGTGGTGGAGATGGATGGTATGAGATGACCCGTATTATCTGGCAGTTCATCAAGGAGAAGCTC  
 ATCCTGCCCCACGTGGACATCCAGCTAAAGTATTTTACCTCGGGCTCCCAAACCGTGACCAGACTGATG  
 ACCAGGTCAACATTGACTCTGCACTGGCCACCCAGAAGTACAGTGTGGCTGTCAAGTGTCCACCATCAC  
 CCCTGATGAGGCCGTGTGAAGAGTTCAGCTGAAGAAGATGTGAAAAGTCCCAATGGAACATCCGG  
 AACATCTGGGGGGACTGTCTCCGGGAGCCCATCATCTGCAAAAACATCCCACGCCTAGTCCCTGGCT  
 GGACCAAGCCCATCACATTGGCAGGCACGCCATGGCGACCAGTACAAGCCACAGACTTTGTGGCAGA  
 CCGGGCCGGCACTTTCAAATGGTCTTACCCCAAAGATGGCAGTGGTGTCAAGGAGTGGGAAGTGTAC  
 AACTTCCCGCAGCGCGGTGGGATGGGCATGTACAACACCCAGCAGTCCATCTCAGGTTTTGCGCACA  
 GCTGCTTCCAGTATGCCATCCAGAAGAAATGGCCGCTGTACATGAGCACCAAGAACCATACTGAAAGC  
 CTACGATGGGCGTTTTCAAGGACATCTTCCAGGAGATCTTTGACAAGCACTATAAGACCGACTTCGACAAG  
 AATAAGATCTGGTATGAGCACCGGCTCATTGATGACATGGTGGCTCAGGTCTCAAGTCTTCGGGTGGCT  
 TTGTGTGGGCTGCAAGAAGTATGACGGAGATGTGCAGTCAGACATCCTGGCCAGGGCTTTGGCTCCCT  
 TGGCCTGATGACGTCCGTCTGGTCTGCCCTGATGGGAAGACGATTGAGGCTGAGGCCGCTCATGGGACC  
 GTCACCCGCCACTATCGGGAGCACCAAGGGCCGGCCACCAGCACCAACCCCATCGCCAGCATCTTTG  
 CCTGGACACGTGGCCTGGAGCACCGGGGAAGCTGGATGGGAACCAAGACCTCATCAGGTTGCCAGAT  
 GCTGGAGAAGGTGTGCGTGGAGACGGTGGAGAGTGGAGCCATGACCAAGGACCTGGCGGGCTGCATTAC  
 GCCTCAGCAATGTGAAGCTGAACGAGCACTTCTGAACACCACGGACTTCTCGACACCATCAAGAGCA  
 ACCTGGACAGAGCCCTGGGCAGGCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC201152 protein sequence  
 Red=Cloning site Green=Tags(s)

MAGYLRVVRSLCRASGSRPAWAPAALTAPTSQEQRPRHYADKRIKVAKPVVEMDGDDEMTRIIWQFIKEKL  
 ILPHVDIQLKYFDLGLPNRDQTDQVTIDSALATQKYSVAVKCATITPDEARVEEFKLLKMKWSPNGTIR  
 NILGGTVFREPIICKNIPRLVPGWTKPITIGRHAHGDQYKATDFVADRAGTFKMFVTPKDGSGVKEWEVY  
 NFPAGGVGMGYNTDESISGFAHSCFYAIQKKWPLYMSTKNLILKAYDGRFKDIFQEIFDKHYKTDYDK  
 NKIWEYHRLIDDMVAQVLKSSGGFVWACKNYDGDVQSDILAQGFGLMTSVLVCPDGKTI EAEAAHGT  
 VTRHYREHQGRPTSTNPIASIFAWTRGLEHRGKLDGNQDLIRFAQMLEKVCVETVESGAMTKDLAGCIIH  
 GLSNVKLNEHFLNTTDFLDTIKSNLDRALGRQ

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6153\\_a02.zip](https://cdn.origene.com/chromatograms/mk6153_a02.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_002168

**ORF Size:** 1356 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](mailto: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:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

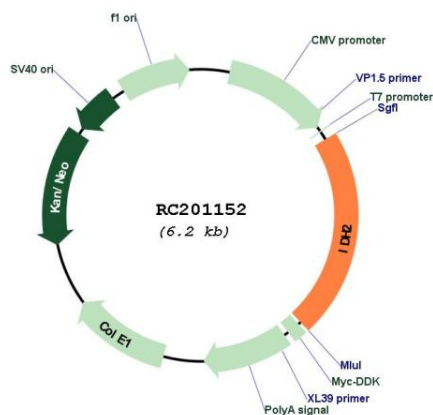
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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.

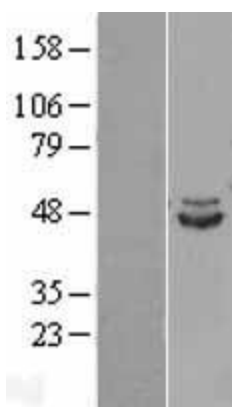
RefSeq:	<a href="#">NM_002168.4</a>
RefSeq Size:	1818 bp
RefSeq ORF:	1359 bp
Locus ID:	3418
UniProt ID:	<a href="#">P48735</a>
Cytogenetics:	15q26.1
Domains:	isodh
Protein Pathways:	Citrate cycle (TCA cycle), Glutathione metabolism, Metabolic pathways
MW:	50.9 kDa

**Gene Summary:** Isocitrate dehydrogenases catalyze the oxidative decarboxylation of isocitrate to 2-oxoglutarate. These enzymes belong to two distinct subclasses, one of which utilizes NAD(+) as the electron acceptor and the other NADP(+). Five isocitrate dehydrogenases have been reported: three NAD(+)-dependent isocitrate dehydrogenases, which localize to the mitochondrial matrix, and two NADP(+)-dependent isocitrate dehydrogenases, one of which is mitochondrial and the other predominantly cytosolic. Each NADP(+)-dependent isozyme is a homodimer. The protein encoded by this gene is the NADP(+)-dependent isocitrate dehydrogenase found in the mitochondria. It plays a role in intermediary metabolism and energy production. This protein may tightly associate or interact with the pyruvate dehydrogenase complex. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2014]

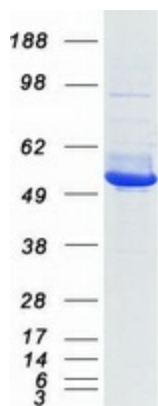
## Product images:



Circular map for RC201152



Western blot validation of overexpression lysate (Cat# [LY400787]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201152 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified IDH2 protein (Cat# [TP301152]). The protein was produced from HEK293T cells transfected with IDH2 cDNA clone (Cat# RC201152) using MegaTran 2.0 (Cat# [TT210002]).