

Product datasheet for RC201692

IDH3G (NM_004135) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	IDH3G (NM_004135) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	IDH3G
Synonyms:	H-IDHG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC201692 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGCTGAAGGTAGCGACCGTCGCCGCGAGCGCCGCAAGGCGGTGCTCGGGCCAGCCCTTCTCTGCC
GTCCCTGGGAGGTTCTAGGCGCCACGAGGTCCCTCGAGGAACATCTTTTCAGAACAACAATTCCTCC
GTCCGCTAAGTATGGCGGGCGGCACACGGTGACCATGATCCCAGGGGATGGCATCGGGCCAGAGCTCATG
CTGCATGTCAAGTCCGTCTTCAGGCACGCATGTGTACCAGTGGACTTTGAAGAGGTGCACGTGAGTTCCA
ATGCTGATGAAGAGGACATTCGCAATGCCATCATGGCCATCCGCCGGAACCGCGTGGCCCTGAAGGGCAA
CATCGAAACCAACCATAACCTGCCACCGTCGCACAATCTCGAAACAACATCCTTCGCACCAGCCTGGAC
CTCTATGCCAACGTCACTCACTGTAAGAGCCTTCCAGGCGTGGTGACCCGGCACAAGGACATAGACATCC
TCATTGTCCGGGAGAACACAGAGGGCGAGTACAGCAGCCTGGAGCATGAGAGTGTGGCGGGAGTGGTGGA
GAGCCTGAAGATCATACCAAGGCCAAGTCCCTGCGCATTGCCGAGTATGCCTTCAAGCTGGCGCAGGAG
AGCGGGCGCAAGAAAGTGACGGCCGTGCACAAGGCCAACATCATGAAACTGGGCGATGGGCTTTCTCC
AGTGCTGCAGGGAGGTGGCAGCCCGTACCCTCAGATCACCTTCGAGAACATGATTGTGGATAACACCAC
CATGCAGCTGGTGTCCCGGCCAGCAGTTTGTGTGATGGTGTGATGCCAATCTCTATGGCAACATCGTC
AACATGTCTGCGCGGGACTGGTCGGGGCCAGGCCCTGTGGCTGGGGCCAATATGGCCATGTGTAGC
CGGTGTTTGAACAGCTACGAGGAACACCGGCAAGAGTATCGCCAATAAGAACATCGCCAACCCACGGC
CACCTGTGGCCAGCTGCATGATGCTGGACCCTCAAGCTGCACTCCTATGCCACCTCCATCCGTAAG
GCTGTCTGGCATCCATGGACAATGAGAATATGCACACTCCGGACATCGGGGGCCAGGGCACAACATCTG
AAGCCATCCAGGACGTATCCGCCACATCCGCGTCATCAACGGCCGGGCGTGGAGGCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC201692 protein sequence
Red=Cloning site Green=Tags(s)

MALKVATVAGSAAKAVLGPALLCRPWEVLGAHEVPSRNIFSEQTIPPSAKYGRHTVTMIPGDGIGPELM
 LHVKSVFRHACVPVDFEEVHVSSNADEEDIRNAIMAIRNRVALKGNIE TNHNLPPSHKSRNNILRTSLD
 LYANVIHCKSLPGVVTRHKDIDILIVRENTEGEYSSLEHESVAGVVESLKIIITKAKSLRIA EYAFKLAQE
 SGRKKVTAVHKANIMKLDGDLFLQCCREVAARYPQITFENMIVDNTTMQLVSRPQQFDVMVMPNL YGNIV
 NNVCAGLVGGPLVAGANYGHVYAVFETATRNTGKSIANKNIANPTATLLASCMLDLHLKLSYATSIRK
 AVLASMDNENMHTPDIGGQTTSEAIQDVIRHIRVINGRAVEA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6299_d06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_004135

ORF Size: 1179 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_004135.4](#)

RefSeq Size: 1502 bp

RefSeq ORF: 1182 bp

Locus ID: 3421

UniProt ID: [P51553](#)

Cytogenetics: Xq28

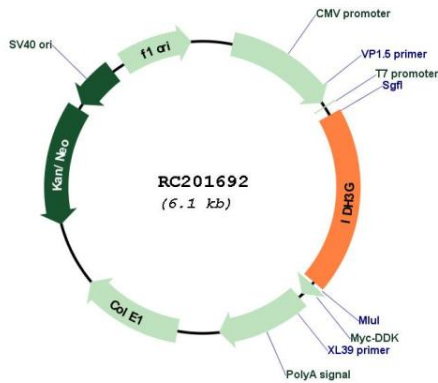
Domains: isodh

Protein Pathways: Citrate cycle (TCA cycle), Metabolic pathways

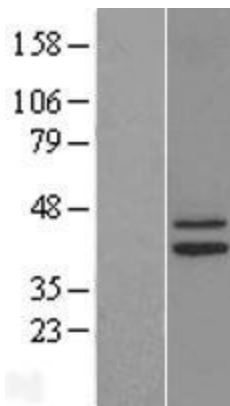
MW: 42.8 kDa

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. NAD(+)-dependent isocitrate dehydrogenases catalyze the allosterically regulated rate-limiting step of the tricarboxylic acid cycle. Each isozyme is a heterotetramer that is composed of two alpha subunits, one beta subunit, and one gamma subunit. The protein encoded by this gene is the gamma subunit of one isozyme of NAD(+)-dependent isocitrate dehydrogenase. This gene is a candidate gene for periventricular heterotopia. Several alternatively spliced transcript variants of this gene have been described, but only some of their full length natures have been determined. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC201692



Western blot validation of overexpression lysate (Cat# [LY418190]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201692 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).