

## Product datasheet for RC200313

### IDH3A (NM\_005530) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	IDH3A (NM_005530) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	IDH3A
Synonyms:	RP90
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC200313 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTGGGCCCGGTGGATCTCTAAGGTCTCTCGGCTGCTGGGGCATTCCACAACCCAAAACAGGTGA  
CCAGAGGTTTTACTGGTGGTGTTCAGACAGTAACTTAATCCAGGAGATGGATTGGCCAGAAATTTTC  
AGCTGCAGTTATGAAGATTTTTGATGCTGCCAAAGCACCTATTCAGTGGGAGGAGCGGAACGTCCTGCC  
ATCAAGGACCTGGAGGAAAGTGGATGATCCCTTCAGAGGCTAAAGAGTCCATGGATAAGAACAAGATGG  
GCTTGAAAGGCCCTTTGAAGACCCCAATAGCAGCCGGTCACCCATCTATGAATTTACTGCTGCGCAAAAC  
ATTTGACCTTTACGCGAATGTCCGACCATGTGTCTCTATCGAAGGCTATAAAACCCCTTACACCGATGTA  
AATATTGTGACCATTCGAGAGAACACAGAAGGAGAATACAGTGGAAATGAGCATGTGATTGTTGATGGAG  
TCGTGCAGAGTATCAAGCTCATCACCGAGGGGGCGAGCAAGCGCATTGCTGAGTTTGCCTTTGAGTATGC  
CCGGAACAACCACCGGAGCAACGTACGGCGGTGCACAAAGCCAACATCATGCGGATGTCAGATGGGCTT  
TTTCTACAAAAATGCAGGGAAGTTGCAGAAAGCTGTAAGATATTAATTTAATGAGATGTACCTTGATA  
CAGTATGTTTGAATATGGTACAAGATCCTTCCCAATTTGATGTTCTTGTATGCCAAATTTGATGGAGA  
CATCCTTAGTGACTTGTGTGCAGGATTGATCGGAGGTCTCGGTGTGACACCAAGTGGCAACATTGGAGCC  
AATGGGGTTGCAATTTTTGAGTCGGTTCATGGGACGGCTCCAGACATTGCAGGCAAGGACATGGCGAATC  
CCACAGCCCTCCTGCTCAGTGCCGTGATGATGCTGCGCCACATGGGACTTTTTGACCATGCTGCAAGAAT  
TGAGGCTGCGTGTGTTGCTACAATTAAGGACGGAAGAGCTTGACAAAAGATTTGGGAGGCAATGCAAAA  
TGCTCAGACTTCACAGAGGAAATCTGTCCCGAGTAAAAGATTTAGAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



[View online »](#)

**Protein Sequence:** >RC200313 protein sequence  
 Red=Cloning site Green=Tags(s)

MAGPAWISKVSRLLGAFHNPKQVTRGFTGGVQTVTLIPGDGIGPEISAAVMKIFDAAKAPIQWEERNVTA  
 IQGPGGKWMIPSEAKESMDKNMGLKGPLKTPAAGHPSMNLRLKTFDLYANVRPCVSIIEGYKTPYTDV  
 NIVTIRENTEGEYSGIEHVIVDGVVQSIKLITEGASKRIAEFAFEYARNNHRSNVTAVHKANIMRMSDGL  
 FLQKCREVAESCKDIKFNEMYLDTVCLNMVQDPSQFDVLMVPLNYGDILSDLCAGLIGGLGVTPSGNIGA  
 NGVAIFESVHGTAPDIAGKDMANPTALLLSAVMMLRHMGLFDHAARIEAACFATIKDGKSLTKDLGGNAK  
 CSDFTTEICRRVKDLD

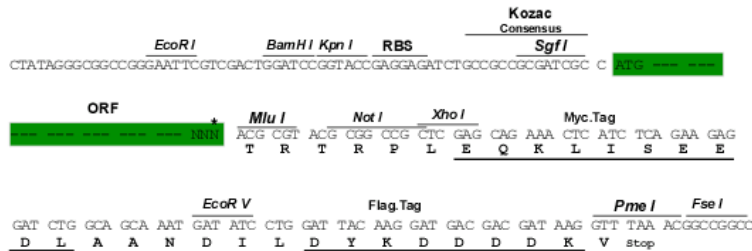
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6051\\_c01.zip](https://cdn.origene.com/chromatograms/mk6051_c01.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\_005530

**ORF Size:** 1098 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\\_005530.3](#)

**RefSeq Size:** 2701 bp

**RefSeq ORF:** 1101 bp

**Locus ID:** 3419

**UniProt ID:** [P50213](#)

**Cytogenetics:** 15q25.1

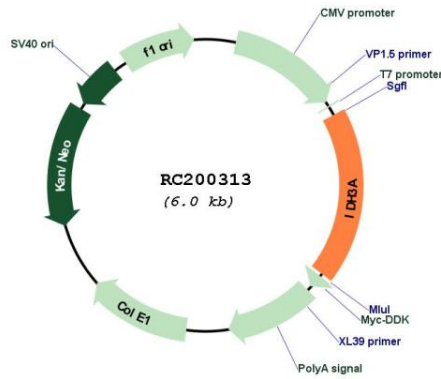
**Domains:** isodh

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

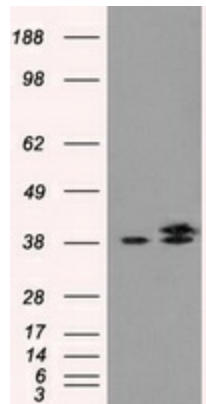
**MW:** 39.6 kDa

**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 alpha subunit of one isozyme of NAD(+)-dependent isocitrate dehydrogenase. [provided by RefSeq, Jul 2008]

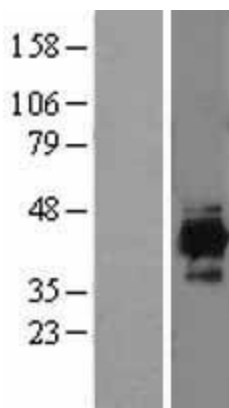
Product images:



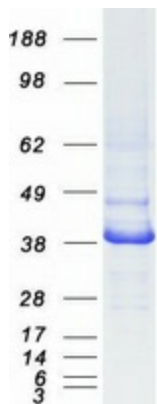
Circular map for RC200313



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY IDH3A (Cat# RC200313, 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-IDH3A (Cat# [TA500739]). Positive lysates [LY401698] (100ug) and [LC401698] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401698]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200313 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified IDH3A protein (Cat# [TP300313]). The protein was produced from HEK293T cells transfected with IDH3A cDNA clone (Cat# RC200313) using MegaTran 2.0 (Cat# [TT210002]).