

## Product datasheet for **RG200108**

### IDH3B (NM\_006899) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	IDH3B (NM_006899) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	IDH3B
Synonyms:	RP46
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG200108 representing NM_006899 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGGCATTGAGCGGAGTCCGCTGGCTGACCCGAGCGCTGGTCTCCGCCGGAACCCTGGGGCATGGA  
GAGGTCTGAGTACCTCGGCCGCGCGCACGCTGCATCGCGGAGCCAGGCCGAGGACGTGAGGGTGGAGGG  
CTCCTTTCCCGTGACCATGCTTCCGGGAGACGGTGTGGGGCTGAGCTGATGCACGCCGTC AAGGAGGTG  
TTCAAGGCTGCCGCTGTCCAGTGGAGTCCAGGAGCACCACTGAGTGAGGTGCAGAATATGCCATCTG  
AGGAGAAGCTGGAGCAGGTGCTGAGTTCATGAAGGAGAACAAAGTGCCATCATTGGAAAGATTCATAC  
CCCGATGGAGTATAAGGGGGAGCTAGCCTCCTATGATATGCGGCTGAGGCGTAAGTTGGACTTATTTGCC  
AACGTAGTCCATGTGAAGTCACTTCTGGGTATATGACTCGGCACAACAATCTAGACCTGGTGATCATT  
GAGAGCAGACAGAAGGGGAGTACAGCTCTCTGGAACATGAGAGTGCAAGGGGTGTGATTGAGTGTGGAA  
GATTGTACACGAGCCAAGTCTCAGCGGATTGCAAAGTTCGCCTTTGACTATGCCACCAAGAAGGGGCGG  
GGCAAGGTCACTGCTGTCCACAAGGCCAACATCATGAACTTGGGGATGGGTTGTTCCTGCAGTGTGTG  
AGGAAGTTGTGAACTGTACCCAAAAATCAAATTTGAGACAATGATCATAGACAAGTGTGCATGCAGCT  
GGTGCAGAATCCTTACCAGTTTGTGCTTGTGATGCCCAATCTCTATGGGAACATTATTGACAATCTG  
GCTGCTGGCCTGGTTGGGGGAGCTGGTGTGGTCCCTGGTGAGAGCTATAGTGCAGAATACGCAGTCTTTG  
AGACGGGTGCCCGCACCCATTTGCCAGGCAGTGGGCAGGAATATAGCCAATCCACGGCCATGCTGCT  
GTCGGCTTCCAACATGCTGCGGCATCTTAATCTTGAGTATCACTCCAGCATGATCGCAGATGCGGTGAAG  
AAGGTGATCAAAGTTGGCAAGGTGCGGACTCGAGACATGGCGGCTACAGCACCAACCAAGCACTTCATCA  
AGTCTGTCATCGGTCACCTGCAGACTAAAGGGAGC

**ACCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG200108 representing NM\_006899  
 Red=Cloning site Green=Tags(s)

MAALSGVRWLTRALVSAGNPGAWRGLSTSAAHAASRSQAEDVRVEGSFPVTMLPGDGVGPELMHAVKEV  
 FKAAAVPVEFQEHLSEVQNMASEEKLEQVLSSMKENKVAIIGKIHTPMEYKDELASYDMRLRRKLDLFA  
 NVVHVKSLPGYMRHNNLDLVIIREQTEGEYSSLEHESARGVIECLKIVTRAKSQRIAKFAFDYATKKGR  
 GKVTAVHKANIMKLGDFLQCCEEVAELYPKIKFETMIIDNCCMQLVQNPYQFDVLVMPNLYGNIIDNL  
 AAGLVGGAGVPGESYSAYAVFETGARHPFAQAVGRNIANPTAMLLSASNMLRHLNLEYHSSMIADAVK  
 KVIKVGKVRTRDMGGYSTTTDFIKSVIGHLQTKGS

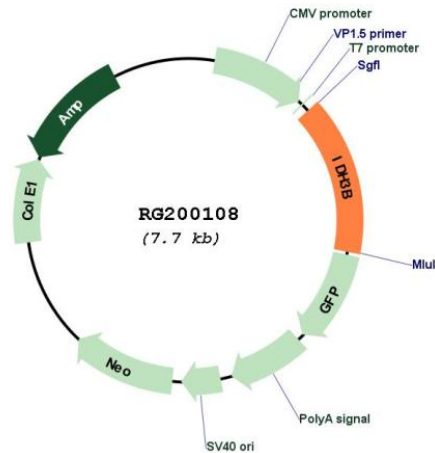
TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_006899

<b>ORF Size:</b>	1155 bp
<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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>RefSeq:</b>	<a href="#">NM_006899.5</a>
<b>RefSeq Size:</b>	1561 bp
<b>RefSeq ORF:</b>	1158 bp
<b>Locus ID:</b>	3420
<b>UniProt ID:</b>	<a href="#">O43837</a>
<b>Cytogenetics:</b>	20p13
<b>Domains:</b>	isodh
<b>Protein Pathways:</b>	Citrate cycle (TCA cycle), Metabolic pathways

**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 beta subunit of one isozyme of NAD(+)-dependent isocitrate dehydrogenase. Multiple alternatively spliced transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq, Sep 2016]