

Product datasheet for **SC101266**

IDH3B (NM_174855) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	IDH3B (NM_174855) Human Untagged Clone
Tag:	Tag Free
Symbol:	IDH3B
Synonyms:	RP46
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Cell Selection:	None
Fully Sequenced ORF:	>NCBI ORF sequence for NM_174855, the custom clone sequence may differ by one or more nucleotides

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ATGGCGGCATTGAGCGGAGTCCGCTGGCTGACCCGAGCGCTGGTCTCCGCCGGGAACCCTGGGGCATGGA
GAGGTCTGAGTACCTCGGCCGCGGCACGCTGCATCGCGGAGCCAGGCCGAGGACGTGAGGGTGGAGGG
CTCCTTTCCCGTGACCATGCTTCCGGGAGACGGTGTGGGGCTGAGCTGATGCACGCCGTC AAGGAGGTG
TTCAAGGCTGCCGCTGTCCAGTGGAGTCCAGGAGCACCACTGAGTGAGGTGCAGAATATGGCATCTG
AGGAGAAGCTGGAGCAGGTGCTGAGTTCATGAAGGAGAACAAAGTGCCATCATTGGAAAGATTCATAC
CCCGATGGAGTATAAGGGGGAGCTAGCCTCCTATGATATGCGGCTGAGGGTAAGTTGGACTTATTTGCC
AACGTAGTCCATGTGAAGTCACTTCCTGGGTATATGACTCGGCACAACAATCTAGACCTGGTGATCATTC
GAGAGCAGACAGAAGGGGAGTACAGCTCTCTGGAACATGAGAGTGCAAGGGGTGTGATTGAGTGTGGAA
GATTGTACACGAGCCAAGTCTCAGCGGATTGCAAAGTTGCCTTTGACTATGCCACCAAGAAGGGGCGG
GGCAAGGTCACGTGCTGTCCACAAGGCCAACATCATGAACTTGGGGATGGGTTGTTCTGCAGTGTGTG
AGGAAGTTGCTGAACTGTACCCAAAAATCAAATTTGAGACAATGATCATAGACAAGTGTGCATGCAGCT
GGTGCAGAATCCTTACCAGTTTGTGCTTGTGATGCCCAATCTCTATGGGAACATTATTGACAATCTG
GCTGCTGGCCTGGTTGGGGGAGCTGGTGTGGTCCCTGGTGAGAGCTATAGTGCAGAATACGCAGCTTTTG
AGACGGGTGCCCGCACCCATTTGCCAGGCAGTGGGCAGGAATATAGCCAATCCCACGGCCATGCTGCT
GTCGGCTTCCAACATGCTGCGGCATCTTAATCTTGAGTATCACTCCAGCATGATCGCAGATGCGGTGAAG
AAGGTGATCAAAGTTGGCAAGGTTGCAACCTCTGACATGGGTGGCTATGCTACTTGCCATGACTTCACTG
AGGCTGTCATTGCTGCCTTGCCCCACCCATAG
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5' Read Nucleotide Sequence:	>OriGene 5' read for NM_174855 unedited CCGTTAGATTTGTATACGACTCATATAGGCGGCCGCTGAATCGGCACCAGGAACATGGCG GCATTGAGCGGAGTCCGCTGGCTGACCCGAGCGCTGGTCTCCGCCGGAAACCTGGGGCA TGGAGAGGTCTGAGTACCTCGGCCGCGGCACGCTGCATCGCGGAGCCAGGCCGAGGAC GTGAGGGTGGAGGGCTCCTTTCCCGTGACCATGCTTCCGGGAGACGGTGTGGGGCCTGAG CTGATGCACGCCGTCAAGGAGGTGTTCAAGGCTGCCGTGTCCCAGTGGAGTTCAGGAG CACCACCTGAGTGAGGTGCAGAATATGGCATCTGAGGAGAAGCTGGAGCAGGTGCTGAGT TCCATGAAGGAGAACAAAGTGGCCATCATTGGAAGAGTCAACCCGATGGAGTATAAG GGGGAGCTAGCCTCCTATGATATGCGGGTGAAGTGGACTTATTTGCCAACGTA GTCCATGTGAAGTCACTTCTGGGTATATGACTCGGCACAACAATCTAGACCTGGTGATC ATTCGAGAGCAGACAGAAGGGGAGTACAGCTCTCTGGAACATGAGAGTGAAGGGGTGTG ATTGAGTGTGTTGAAGATTGTACACGAGCCAAGTCTCAGCGGAGTTGCAAAGTTCGCCTT TGACTATGCCCAAGAAGGGCGGNGCTAGGTCAGTGTCCACAGGCCACATATGACT GGGGAANGGGGTTGTCCCTTCANTGTGTAGGAAGAATTNCTTGACTGTCCCAATCA AATTGAGACATGATCATAGACACTGCTGCTGACTGGTGCAGACCTACGNNTTNGGGGG GCCTTGGACGCCAACTCTATGGAACATATGCATTGGTTGCCCGCTGGGGGGACCCCN NNCCCCTCTTGGGAGACATAGGGCAAAAACCTTTA
Restriction Sites:	NotI-NotI
ACCN:	NM_174855
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<ol style="list-style-type: none"> 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:	<u>NM_174855.1</u> , <u>NP_777280.1</u>
RefSeq Size:	1208 bp
RefSeq ORF:	1152 bp
Locus ID:	3420
UniProt ID:	<u>O43837</u>
Cytogenetics:	20p13
Protein Pathways:	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]

Transcript Variant: This variant (2) lacks a portion of the coding region which results in a frameshift and an early stop codon, compared to variant 1. The encoded isoform (b) is shorter and has a distinct C-terminus compared to isoform a.