

Product datasheet for RC238088

Isocitrate dehydrogenase (IDH1) (NM_001282386) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|--------------------------------------------------------------------------------|
| Product Type: | Expression Plasmids |
| Product Name: | Isocitrate dehydrogenase (IDH1) (NM_001282386) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Isocitrate dehydrogenase |
| Synonyms: | HEL-216; HEL-S-26; IDCD; IDH; IDP; IDPC; PICD |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >RC238088 representing NM_001282386 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCCAAAAAATCAGTGGCGTTCTGTGGTAGAGATGCAAGGAGATGAAATGACACGAATCATTGGG
AATTGATTAAGAGAACTCATTTTTCCCTACGTGGAATTGGATCTACATAGCTATGATTTAGGCATAGA
GAATCGTGATGCCACCAACGACCAAGTCACCAAGGATGCTGCAGAAGCTATAAGAAGCATAATGTTGGC
GTCAAATGTGCCACTATCACTCCTGATGAGAAGAGGGTTGAGGAGTTCAAGTTGAAACAAATGTGGAAT
CACAAATGGCACCATACGAAATATTCTGGGTGGCACGGTCTTCAGAGAAGCCATTATCTGCAAAAATAT
CCCCCGCTTGTGAGTGGATGGTAAAACCTATCATCATAGGTCGTCATGCTTATGGGGTCAATACAGA
GCAACTGATTTTGTGTTCTGGCCTGGAAAAGTAGAGATAACCTACACACCAAGTGACGGAACCCAAA
AGGTGACATACCTGGTACATAACTTTGAAGAAGGTGGTGGTGTGCCATGGGGATGTATAATCAAGATAA
GTCAATTGAAGATTTTGCACACAGTTCCTTCCAAATGGCTCTGTCTAAGGGTTGGCCTTTGTATCTGAGC
ACCAAAAACACTATTCTGAAGAAATATGATGGCGTTTTAAAGACATCTTTCAGGAGATATATGACAAGC
AGTACAAGTCCCAGTTTGAAGCTCAAAGATCTGGTATGAGCATAGGCTCATCGACGACATGGTGGCCCA
AGCTATGAAATCAGAGGGAGGCTTCATCTGGCCGTGTA AAAACTATGATGGTGACGTGCAGTCGGACTCT
GTGGCCCAAGGGTATGGCTCTCTCGGCATGATGACCAGCGTGTGGTTTGTCCAGATGGCAAGACAGTAG
AAGCAGAGTCTGCCACGGGACTGTAACCCGCTCACTACCGCATGTACCAGAAAGGACAGGAGACGTCCAC
CAATCCCATTGCTTCCATTTTTGCTGGACCAGAGGGTTAGCCCACAGAGCAAAGCTTGATAACAATAAA
GAGCTTGCTTCTTTGCAATGCTTTGGAAGAAGTCTCTATTGAGACAATTGAGGCTGGCTTCATGACCA
AGGACTTGGCTGCTTGCATTAAGGTTTACCCAATGTGCAACGTTCTGACTACTTGAATACATTTGAGTT
CATGGATAAACTTGAGAAAACCTGAAGATCAAACCTAGCTCAGGCCAACTT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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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: [NM_001282386.1](#), [NP_001269315.1](#)

RefSeq Size: 2313 bp

RefSeq ORF: 1245 bp

Locus ID: 3417

UniProt ID: [O75874](#)

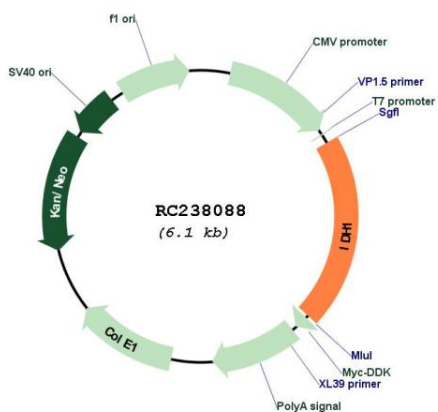
Cytogenetics: 2q34

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

MW: 46.7 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 cytoplasm and peroxisomes. It contains the PTS-1 peroxisomal targeting signal sequence. The presence of this enzyme in peroxisomes suggests roles in the regeneration of NADPH for intraperoxisomal reductions, such as the conversion of 2, 4-dienoyl-CoAs to 3-enoyl-CoAs, as well as in peroxisomal reactions that consume 2-oxoglutarate, namely the alpha-hydroxylation of phytanic acid. The cytoplasmic enzyme serves a significant role in cytoplasmic NADPH production. Alternatively spliced transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, Sep 2013]

Product images:



Circular map for RC238088