

## Recombinant Human IDH2, His-tagged

**Cat. No.** IDH2-28080TH    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>Product Overview</b> | Recombinant fragment, corresponding to amino acids 217-442 of Human IDH2 with an N terminal His tag; MWt 26 kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>ProteinLength</b>    | 217-442 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | 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 mitochondria. It plays a role in intermediary metabolism and energy production. This protein may tightly associate or interact with the pyruvate dehydrogenase complex. |
| <b>Conjugation</b>      | HIS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Form</b>             | Lyophilised:Reconstitute with 87 µl aqua dest.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage buffer</b>           | Preservative: None<br>Constituents: 0.5% Trehalose, 6M Urea, 100mM Sodium phosphate, 10mM Sodium chloride, pH 4.5                                                                                                                                        |
| <b>Storage</b>                  | Shipped at 4°C. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.                                                                                                                                                                    |
| <b>Sequences of amino acids</b> | VGMGMYNTDESISGFAHSCFQYAIQKKWPLYMSTKNTILK AYDGRFKDIFQEIFDKH<br>YKTD FDKNKI WYEHRLIDDMV AQVLKSSGGFVWACKNYDGDVQSDILAQGFGLG<br>LMTS VLVCPDGKTIEAEAAHGTVTRHYREHQKGRPTSTNPIA SIFAWTRGLEHRGK<br>LDGNQDLIRFAQMLEKVCVETVESGA MTKDLAGCIHGLSNVKLNEHFLNTTDFLDTI<br>K |
| <b>Sequence Similarities</b>    | Belongs to the isocitrate and isopropylmalate dehydrogenases family.                                                                                                                                                                                     |

## GENE INFORMATION

|                        |                                                                                                          |
|------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | IDH2 isocitrate dehydrogenase 2 (NADP+), mitochondrial [ Homo sapiens ]                                  |
| <b>Official Symbol</b> | IDH2                                                                                                     |
| <b>Synonyms</b>        | IDH2; isocitrate dehydrogenase 2 (NADP+), mitochondrial; isocitrate dehydrogenase [NADP], mitochondrial; |
| <b>Gene ID</b>         | 3418                                                                                                     |
| <b>mRNA Refseq</b>     | NM_002168                                                                                                |
| <b>Protein Refseq</b>  | NP_002159                                                                                                |
| <b>MIM</b>             | 147650                                                                                                   |

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|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Uniprot ID</b>          | P48735                                                                                                                                                                                                                                                             |
| <b>Chromosome Location</b> | 15q21-qter                                                                                                                                                                                                                                                         |
| <b>Pathway</b>             | Citrate cycle (TCA cycle), organism-specific biosystem; Citrate cycle (TCA cycle), conserved biosystem; Citrate cycle, first carbon oxidation, oxaloacetate => 2-oxoglutarate, organism-specific biosystem; Citrate cycle, first carbon oxidation, oxaloacetate => |
| <b>Function</b>            | NAD binding; isocitrate dehydrogenase (NADP+) activity; isocitrate dehydrogenase (NADP+) activity; magnesium ion binding; oxidoreductase activity;                                                                                                                 |

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