

## Product datasheet for **SC335983**

### Isocitrate dehydrogenase (IDH1) (NM\_001282387) Human Untagged Clone

#### Product data:

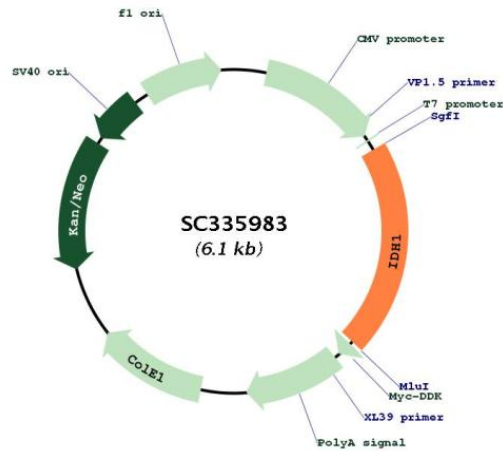
**Product Type:** Expression Plasmids  
**Product Name:** Isocitrate dehydrogenase (IDH1) (NM\_001282387) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** IDH1  
**Synonyms:** HEL-216; HEL-S-26; IDCD; IDH; IDP; IDPC; PICD  
**Vector:** pCMV6-Entry (PS100001)  
**Fully Sequenced ORF:** >SC335983 representing NM\_001282387.  
Blue=Insert sequence Red=Cloning site Green=Tag(s)

```
ATGTCCAAAAAATCAGTGGCGTTCTGTGGTAGAGATGCAAGGAGATGAAATGACACGAATCATTGG
GAATTGATTAAGAGAACTCATTTTTCCCTACGTGGAATTGGATCTACATAGCTATGATTTAGGCATA
GAGAATCGTGATGCCACCAACGACCAAGTCACCAAGGATGCTGCAGAAGCTATAAAGAAGCATAATGTT
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AAATCACCAAATGGCACCATACGAAATATTCTGGGTGGCAGGCTTTCAGAGAAGCCATTATCTGCAAA
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TACAGAGCAACTGATTTTGTGTTCTGGGCCTGGAAAAGTAGAGATAACCTACACACCAAGTGACGGA
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TATCTGAGCACCACAAAACACTATTCTGAAGAAATATGATGGGCGTTTTAAAGACATCTTTCAGGAGATA
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CAGGAGACGTCCACCAATCCCATTGCTTCCATTTTTGCCTGGACCAGAGGGTTAGCCACAGAGCAAAG
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TTGAATACATTTGAGTTCATGGATAAACTTGGAGAAAACCTGAAGATCAAACCTAGCTCAGGCCAACTT
TAA
```

**Restriction Sites:** SgfI-MluI



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**Plasmid Map:**


**ACCN:** NM\_001282387

**Insert Size:** 1245 bp

**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:**

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\\_001282387.1](#)

**RefSeq Size:** 2470 bp

**RefSeq ORF:** 1245 bp

**Locus ID:** 3417

UniProt ID:	<u>O75874</u>
Cytogenetics:	2q34
Protein Pathways:	Citrate cycle (TCA cycle), Glutathione metabolism, Metabolic pathways
MW:	46.7 kDa
Gene Summary:	<p>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]</p> <p>Transcript Variant: This variant (3) has an alternate 5' UTR exon, compared to variant 1. Variants 1, 2 and 3 encode the same protein.</p>