

## Product datasheet for **RC210582L1V**

### Isocitrate dehydrogenase (IDH1) (NM\_005896) Human Tagged ORF Clone Lentiviral Particle

#### Product data:

Product Type:	Lentiviral Particles
Product Name:	Isocitrate dehydrogenase (IDH1) (NM_005896) Human Tagged ORF Clone Lentiviral Particle
Symbol:	Isocitrate dehydrogenase
Synonyms:	HEL-216; HEL-S-26; IDCD; IDH; IDP; IDPC; PICD
Mammalian Cell Selection:	None
Vector:	pLenti-C-Myc-DDK (PS100064)
Tag:	Myc-DDK
ACCN:	NM_005896
ORF Size:	1242 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(RC210582).
OTI Disclaimer:	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>
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
RefSeq:	<a href="#">NM_005896.2</a>
RefSeq Size:	2339 bp
RefSeq ORF:	1245 bp
Locus ID:	3417
UniProt ID:	<a href="#">O75874</a>
Cytogenetics:	2q34
Domains:	isodh
Protein Pathways:	Citrate cycle (TCA cycle), Glutathione metabolism, Metabolic pathways



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MW: 46.5 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]