

Product datasheet for **KN200313**

IDH3A Human Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 GFP-puro donor, 1 scramble control
Donor DNA:	GFP-puro
Symbol:	IDH3A
Locus ID:	3419
Components:	<p>KN200313G1, IDH3A gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CAGGAGAGCCGGTCGCGTG</p> <p>KN200313G2, IDH3A gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: TGGGCCCGCTGGATCTCTA</p> <p>KN200313D, donor DNA containing left and right homologous arms and GFP-puro functional cassette.</p>

Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; **Left arm sequence in blue**; **GFP-puro in green**; **Right arm in violet**

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AAGGCGAGTT ACATGATCCC CCATGTTGTG CAAAAAAGCG GTTAGCTCCT TCGGTCCTCC GATCGTTGTC
AGAAGTAAGT TGGCCGCAGT GTTATCACTC ATGGTTATGG CAGCACTGCA TAATTCTCTT ACTGTCATGC
CATCCGTAAG ATGCTTTTCT GTGACTGGTG AGTACTCAAC CAAGTCATTC TGAGAATAGT GTATGCCGGC
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TCGTGGTGTG ACGCTCGTCG TTTGGTATGG CTTCATTCAG CTCCGGTTCC CAACGATC

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GE100003, scramble sequence in pCas-Guide vector

Disclaimer:

These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

RefSeq:

[NM_005530](#)

UniProt ID:

[P50213](#)

Synonyms:

H-IDH alpha; isocitrate dehydrogenase (NAD⁺) alpha chain; isocitrate dehydrogenase 3 (NAD⁺) a; isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial; isocitric dehydrogenase; NAD(H)-specific isocitrate dehydrogenase alpha subunit; NAD⁺-specific ICDH

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 alpha subunit of one isozyme of NAD(+)-dependent isocitrate dehydrogenase. [provided by RefSeq, Jul 2008]

Product images:
