

Product datasheet for **KN405053**

DIO1 Human Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 linear donor
Donor DNA:	EF1a-GFP-P2A-Puro
Symbol:	DIO1
Locus ID:	1733



[View online »](#)

Components:
KN405053G1, DIO1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)

KN405053G2, DIO1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)

KN405053D, Linear donor DNA containing LoxP-EF1A-tGFP-P2A-Puro-LoxP:

The sequence below is cassette sequence only. The linear donor DNA also contains proprietary target sequence.

LoxP-EF1A-tGFP-P2A-Puro-LoxP (2739 bp)

ATAACTTCGT ATAATGTATG CTATACGAAG TTATCGTGAG GCTCCGGTGC CCGTCAGTGG GCAGAGCGCA
 CATCGCCAC AGTCCCGAG AAGTTGGGG GAGGGGTGCG CAATTGAACC GGTGCCTAGA GAAGGTGGCG
 CGGGGTAAAC TGGGAAAGTG ATGTCGTGTA CTGGCTCCGC CTTTTCCCG AGGGTGGGG AGAACCGTAT
 ATAAGTCAG TAGTCGCCGT GAACGTTCTT TTTGCAACG GGTTCGCCG CAGAACACAG GTAAGTGCCG
 TGTGTGGTTC CCGCGGGCCT GGCCTCTTTA CGGGTTATGG CCCTTGCGTG CCTTGAATTA CTTCCACCTG
 GCTGCAGTAC GTGATTCTTG ATCCCGAGCT TCGGGTTGGA AGTGGGTGGG AGAGTTTCAG GCCTTGCGCT
 TAAGGAGCCC CTTCGCCTCG TGCTTGAGTT GAGGCCTGGC CTGGGCGCTG GGGCCGCCG GTGCGAATCT
 GGTGGCACCT TCGCGCCTGT CTCGCTGCTT TCGATAAGTC TCTAGCCATT TAAAATTTT GATGACCTGC
 TCGCAGCCTT TTTTCTGGC AAGATAGTCT TGTAAATGCG GGCCAAGATC TGCACACTGG TATTTTCGGT
 TTTGGGGCCG CGGGCGGCGA CGGGGCCCGT GCGTCCCAGC GCACATGTTC GGCAGGCGG GGCCTGCGAG
 CGCGGCCACC GAGAATCGGA CGGGGGTAGT CTAAGCTGG CCGGCCTGCT CTGGTGCCTG GCCTCGCGCC
 GCCGTGTATC GCCCGGCCCT GGGCGGCAAG GCTGGCCCG TCGGCACCAAG TTGCGTGAGC GGAAAGATGG
 CCGCTTCCCG GCCCTGCTGC AGGGAGCTCA AAATGGAGGA CGCGGCGCTC GGGAGAGCGG GCGGGTGAGT
 CACCCACACA AAGGAAAAGG GCCTTTCCGT CCTCAGCCGT CGCTTCATGT GACTCCACGG AGTACCGGGC
 GCCGTCCAGG CACCTCGATT AGTTCTCGAG CTTTGGAGT ACGTCGCTT TAGGTTGGGG GGAGGGGTTT
 TATGCGATGG AGTTTCCCA CACTGAGTGG GTGGAGACTG AAGTTAGGCC AGCTTGGCAG TTGATGTAAT
 TCTCCTTGGG ATTTGCCCTT TTTGAGTTTG GATCTTGGT CATTCTCAAG CCTCAGACAG TGGTTCAAAG
 TTTTTTCTT CCATTTCAAG TGTCGTGAAT GGAGAGCGAC GAGAGCGGCC TGCCCGCCAT GGAGATCGAG
 TGCCGCATCA CCGGCACCTT GAACGGCGTG GAGTTCGAGC TGGTGGGCGG CGGAGAGGGC ACCCCGAGC
 AGGGCCGCAT GACCAACAAG ATGAAGAGCA CCAAAGGCGC CCTGACCTTC AGCCCTACC TGCTGAGCCA
 CGTGATGGG TACGGTTCTT ACCACTTCG CACCTACCC AGCGGCTACG AGAACCCCTT CCTGCACGCC
 ATCAACAACG GCGGCTACAC CAACACCCG ATCGAGAAGT ACGAGGACGG CGGCGTGCTG CACGTGAGCT
 TCAGCTACCG CTACGAGGCC GGCCGCGTGA TCGGCGACTT CAAGGTGATG GGCACCGGCT TCCCCGAGGA
 CAGCGTGATC TTCACCGACA AGATCATCCG CAGCAACGCC ACCGTGGAGC ACCTGCACCC CATGGCGGAT
 AACGATCTGG ATGGCAGCTT CACCCGACC TTCAGCCTGC GCGACGGCGG CTAATACAGC TCCGTGGTGG
 ACAGCCACAT GCACTTCAAG AGCGCCATCC ACCCCAGCAT CCTGCAGAAC GGGGGCCCCA TGTTCCGCTT
 CCGCCGCGTG GAGGAGGATC ACAGCAACAC CGAGCTGGGC ATCGTGAGT ACCAGCACGC CTTCAAGACC
 CCGGATGCAG ATGCCGGTGA AGAAAGAGGA AGCGGAGCTA CTAAGTTCAG CCTGCTGAAG CAGGCTGGAG
 ACGTGGAGGA GAACCTTGA CCTATGACCG AGTACAAGC CACGGTGC GCCTGCCACC GCGACGACGT
 CCCAGGGCC GTACGCACCC TCGCCGCCG GTTCGCCGAC TACCCGCCA CGGCCACAC CGTCGATCCG
 GACCGCCACA TCGAGCGGGT CACCGAGCTG CAAGAACTCT TCCTCACGCG CGTCGGGCTC GACATCGGCA
 AGGTGTGGT GCGGACGAC GCGCCCGCG TGGCGGTCTG GACCACGCC GAGAGCGTGC AAGCGGGGGC
 GGTGTTCCGC GAGATCGGCC CGCGCATGGC CGAGTTGAGC GGTTCGCGG TGCCCGCGCA GCAACAGATG
 GAAGGCCCTC TGCGCCGCA CCGGCCAAG GAGCCCGCT GGTTCCTGGC CACCGTCGGC GTCTCGCCG
 ACCACCAGG CAAGGTCTG GGCAGCGCC TCGTGCTCC CGAGTGAG GCGGCCGAGC GCGCCGGGT
 GCCCGCTTC CTGGAGACCT CCGCGCCCC CAACCTCCC TTCTACGAG GGCTCGGCTT CACCGTCACC
 GCCGACGTC AGGTGCCGA AGGACCGCG ACCTGGTGCA TGACCCGCAA GCCCGGTGCC TGAACTTGT
 TTATTGCAGC TTATAATGGT TACAAATAA GCAATAGCAT CACAAATTTT ACAAATAAAG CATTTTTTTC
 ACTGCATTCT AGTTGTGGT TGTCCAACT CATCAATGTA TCTTAATAA TTCGTATAAT GTATGCTATA CGAAGTTAT



RefSeq:	NM_000792 , NM_001039715 , NM_001039716 , NM_213593 , NM_001324316 , NR_136692 , NR_136693
UniProt ID:	P49895
Synonyms:	5DI; TXDI1
Summary:	The protein encoded by this gene belongs to the iodothyronine deiodinase family. It catalyzes the activation, as well as the inactivation of thyroid hormone by outer and inner ring deiodination, respectively. The activation reaction involves the conversion of the prohormone thyroxine (3,5,3',5'-tetraiodothyronine, T ₄), secreted by the thyroid gland, to the bioactive thyroid hormone (3,5,3'-triiodothyronine, T ₃) by 5'-deiodination. This protein provides most of the circulating T ₃ , which is essential for growth, differentiation and basal metabolism in vertebrates. This protein is a selenoprotein, containing the rare amino acid selenocysteine (Sec) at its active site. Sec is encoded by the UGA codon, which normally signals translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, designated the Sec insertion sequence (SECIS) element, that is necessary for the recognition of UGA as a Sec codon, rather than as a stop signal. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Jun 2018]

Product images:

