

Product datasheet for **RG229217**

IVD (NM_002225) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	IVD (NM_002225) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	IVD
Synonyms:	ACAD2; IVDH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG229217 representing NM_002225 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCAGAGATGGCGACTGCGACTCGGCTGCTGGGGTGGCGTGTGGCGAGCTGGAGGCTGCGGCCGCCGC
TTGCCGGCTTCGTTTCCAGCGGGCCCACTCGCTTTTGCCCGTGGACGATGCAATCAATGGGCTAAGCGA
GGAGCAGAGGCAGCTTCGTCAGACCATGGCTAAGTTCTTCAGGAGCACCTGGCCCCAAGGCCAGGAG
ATCGATCGCAGCAATGAGTTCAAGAACCTGCGAGAATTTTGAAGCAGCTGGGGAACCTGGGCGTATTGG
GCATCACAGCCCCTGTTCAAGTATGGCGGCTCCGGCCTGGGCTACCTGGAGCATGTGCTGGTATGGAGGA
GATATCCCGAGCTTCGGGAGCAGTGGGGCTCAGTTACGGTGCCTCAACCTCTGCATCAACAGCTT
GTACGCAATGGGAATGAGGCCAGAAAAGAGAAGTATCTCCGAAGCTGATCAGTGGTGAATACATCGGAG
CCCTGGCCATGAGTGAGCCCAATGCAGGCTCTGATGTTGTCTCTATGAAGCTCAAAGCGGAAAAGAAAGG
AAATCACTACATCCTGAATGGCAACAAGTTCTGGATCACTAATGGCCCTGATGCTGACGCTCTGATTGTC
TATGCCAAGACAGATCTGGCTGCTGTCAGCTTCTCGGGCATCACAGCCTTCATTGTGGAGAAGGGTA
TGCTGGCTTTAGCACCTCTAAGAAGCTGGACAAGCTGGGGATGAGGGGCTCTAACACCTGTGAGCTAAT
CTTTGAAGACTGCAAGATTCTGCTGCCAACATCTGGCCATGAGAATAAGGGTGTCTACGTGCTGATG
AGTGGCTGGACCTGGACGGCTGGTGTGCTGGCCGGGGGCTCTTGGGCTCATGCAAGCGGCTCTGGACC
ACACCATTCCCTACCTGCACGTGAGGGAAGCCTTTGGCCAGAAGATCGGCCACTTCCAGTTGATGCAGGG
GAAGATGGCTGACATGTACACCCGCTCATGGCGTGTGCGCAGTATGTCTACAATGTCGCAAGGCTGTC
GATGAGGGCCATTGCACTGCTAAGGACTGTGCAGGTGTGATTCTTTACTCAGCTGAGTGTCCACACAGG
TAGCCCTGGACGGCATTCAAGTGTGTTGGTGGCAATGGCTACATCAATGACTTTCCCATGGGCCGCTTTCT
TCGAGATGCCAAGCTGTATGAGATAGGGGCTGGGACCAGCGAGGTGAGGCGGCTGGTATCGGCAGAGCC
TTCAATGCAGACTTTCAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG229217 representing NM_002225
Red=Cloning site Green=Tags(s)

MAEMATATRLLLGWRVASWRLRPPLAGFVSQRAHSLLPVDDAINGLSEEQRQLRQTMAKFLQEHLAPKAQE
 IDRSNEFKNLREFWKQLGNLGLGITAPVQYGGSGLYLEHLVMEEISRASGAVLSYGAHSNLCINQL
 VRNGNEAQKEKYLPKLISGEYIGALAMSEPNAGSDVVSMLKKAEEKGNHYILNGNKFWITNGPDADVLIV
 YAKTDLAAVPASRGITAFIVEKGMPGFSTSKKLDKLGMRGSNTCELI FEDCKIPAANILGHENKGVVYLM
 SGLDLERLVLGGPLGLMQAVLDHTIPYLVHREAFGQKIGHFQLMQGKMADMYTRLMACRQYVYVAKAC
 DEGHTAKDCAGVILYSACATQVALDGIQCFFGGNGYINDFPMGRFLRDAKLYEIGAGTSEVRRLLVIGRA
 FNADFH

TRTRPLE - GFP Tag - V

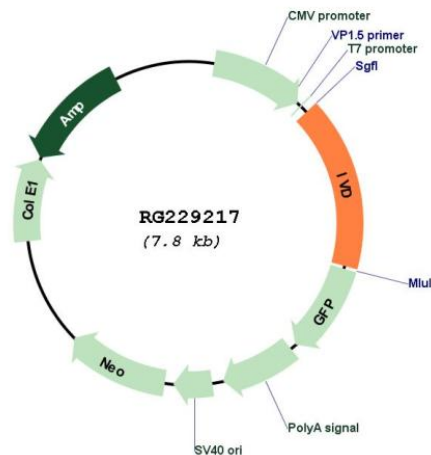
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:

NM_002225

ORF Size:	1278 bp
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. More info</p>
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
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:	<ol style="list-style-type: none"> 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_002225.3 , NP_002216.2
RefSeq Size:	4673 bp
RefSeq ORF:	1272 bp
Locus ID:	3712
UniProt ID:	P26440
Cytogenetics:	15q15.1
Domains:	Acyl-CoA_dh, Acyl-CoA_dh_M, Acyl-CoA_dh_N
Protein Families:	Druggable Genome
Protein Pathways:	Metabolic pathways, Valine, leucine and isoleucine degradation
Gene Summary:	Isovaleryl-CoA dehydrogenase (IVD) is a mitochondrial matrix enzyme that catalyzes the third step in leucine catabolism. The genetic deficiency of IVD results in an accumulation of isovaleric acid, which is toxic to the central nervous system and leads to isovaleric acidemia. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Aug 2017]