

Product datasheet for **SC327852**

IVD (NM_002225) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	IVD (NM_002225) Human Untagged Clone
Tag:	Tag Free
Symbol:	IVD
Synonyms:	ACAD2; IVDH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC327852 representing NM_002225. Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTGTAGTAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGATCGCC
ATGGCAGAGATGGCGACTGCGACTCGGCTGCTGGGGTGGCGTGTGGCGAGCTGGAGGCTGCGGCCGCCG
CTTGCCGGCTTCGTTTCCAGCGGGCCCACTCGCTTTTGGCCGTGGACGATGCAATCAATGGGCTAAGC
GAGGAGCAGAGGCAGCTTCGTACAGACCTGGCTAAGTTCCTTCAGGAGCACCTGGCCCCAAGGCCAG
GAGATCGATCGCAGCAATGAGTTCAAGAACCTGCGAGAATTTTGAAGCAGCTGGGGAACCTGGGCGTA
TTGGGCATCACAGCCCCTGTTCAAGTATGGCGGCTCCGGCCTGGGCTACCTGGAGCATGTGCTGGTATG
GAGGAGATATCCCGAGCTTCCGAGCAGTGGGGCTCAGTTACGGTGCCCACTCCAACCTCTGCATCAAC
CAGCTTGTACGCAATGGGAATGAGGCCAGAAAGAGAAGTATCTCCGAAGCTGATCAGTGGTGAGTAC
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CTGATTGTCTATGCCAAGACAGATCTGGCTGCTGTGCCAGCTTCTCGGGGCATCACAGCCTTCATTGTG
GAGAAGGGTATGCCTGGCTTTAGCACCTCTAAGAAGCTGGACAAGCTGGGGATGAGGGGCTCTAACACC
TGTGAGCTAATCTTTGAAGACTGCAAGATTCTGCTGCCAACATCCTGGGCCATGAGAATAAGGGTGTC
TACGTGCTGATGAGTGGGCTGGACCTGGAGCGGCTGGTGTGCGCGGGGGGCTCTTGGGCTCATGCAA
GCGGTCTGGACCACACCATTCCTACCTGCACGTGAGGGAAGCCTTTGGCCAGAAGATCGGCCACTTC
CAGTTGATGCAGGGAAGATGGCTGACATGTACCCCGCCTCATGGCGTGTGCGCAGTATGTCTACAAT
GTGCCAAGGCCTGCGATGAGGGCCATTGCACTGCTAAGGACTGTGCAGGTGTGATTCTTTACTCAGCT
GAGTGTGCCACACAGGTAGCCCTGGACGCATTAGTGTGTTGGTGGCAATGGCTACATCAATGACTTT
CCCATGGCGCGCTTTCTCGAGATGCCAAGCTGTATGAGATAGGGGCTGGGACCAGCGAGGTGAGCGG
CTGGTCATCGGCAGAGCCTTCAATGCAGACTTTCACTAG
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC

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Restriction Sites:	Sgfl-Mlul
ACCN:	NM_002225
Insert Size:	1281 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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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
RefSeq Size:	4673 bp
RefSeq ORF:	1281 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
MW:	46.7 kDa

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]

Transcript Variant: This variant (1) represents the predominant transcript, and encodes isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments. CCDS Note: The coding region has been updated to shorten the N-terminus to one that is more supported by conservation.