

## Product datasheet for RC228318

### IVD (NM\_001159508) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	IVD (NM_001159508) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	IVD
Synonyms:	ACAD2; IVDH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC228318 representing NM_001159508 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCAGAGATGGCGACTGCGACTCGGCTGCTGGGGTGGCGTGTGGCGAGCTGGAGGCTGCGGCCGCCG  
TTGCCGGCTTCGTTTCCAGCGGGCCACTCGCTTTTGGCCGTGGACGATGCAATCAATGGGCTAAGCGA  
GGAGCAGAGGCAGGAATTTGGAAGCAGCTGGGAACCTGGGCGTATTGGGCATCACAGCCCTGTTTCCAG  
TATGGCGGCTCCGGCCTGGGCTACCTGGAGCATGTGCTGGTATGGAGGAGATATCCCGAGCTTCCGGAG  
CAGTGGGGCTCAGTTACGGTGCCACTCCAACCTGTCATCAACCAGCTTGTACGCAATGGGAATGAGGC  
CCAGAAAGAGAAGTATCTCCCGAAGCTGATCAGTGGTGTAGTACATCGGAGCCCTGGCCATGAGTGAGCCC  
AATGCAGGCTCTGATGTTGTCTCTATGAAGCTCAAAGCGGAAAAGAAAGAAATCACTACATCCTGAATG  
GCAACAAGTTCTGGATCACTAATGGCCCTGATGCTGACGTCTGATTGTCTATGCCAAGACAGATCTGGC  
TGCTGTGCCAGCTTCTCGGGCATCACAGCCTTATTGTGGAGAAGGGTATGCCTGGCTTTAGCACCTCT  
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CTGCTGCCAATCCTGGGCCATGAGAATAAGGGTGTCTACGTGCTGATGAGTGGGCTGGACCTGGAGCG  
GCTGGTGTGGCCGGGGGCTCTTGGGCTCATGCAAGCGGTCTGGACCACACCATTCCCTACCTGCAC  
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TAAGGACTGTGCAGGTGTGATTCTTTACTCAGCTGAGTGTGCCACACAGGTAGCCCTGGACGGCATTTCAG  
TGTTTTGGTGGCAATGGTACATCAATGACTTTCCCATGGCCGCTTTCTTCGAGATGCCAAGCTGTATG  
AGATAGGGGCTGGGACCAGCGAGGTGAGGCGGCTGGTATCGGCAGAGCCTTCAATGCAGACTTTTAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC228318 representing NM\_001159508  
Red=Cloning site Green=Tags(s)

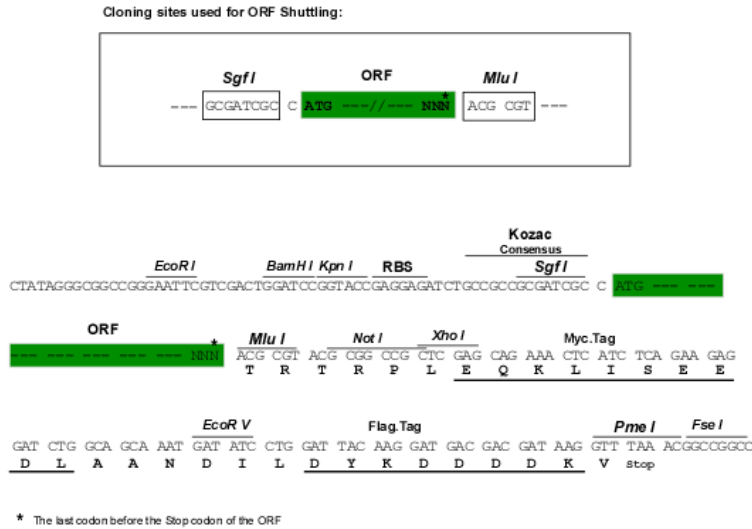
MAEMATATRLLGWRVASWRLRPPLAGFVSQRAHSLLPVDDAINGLSEEQRQEFWKQLGNLGVLGITAPVQ  
 YGGSSGLGYLEHVLVMEESI SRASGAVGLSYGAHSNLCINQLVRNGNEAQKEKYLPKLISGEYIGALAMSEP  
 NAGSDVVSMLKKAEEKGNHYILNGNKFWITNGPDADVLIVYAKTDLAAVPAASRGITAFIVEKGMPPGFSTS  
 KKLDKLGMRGNTCELI FEDCKIPAANILGHENKGVYVLM SGLDLERLVL AGGPLGLMQAVLDHTIPYLH  
 VREAFGQKIGHFQLMQGKMADMYTRLMACRQYVYNNVAKACDEGHCTAKDCAGVILYSAECATQVALDGIQ  
 CFGGNGYINDFPMGRFLRDAKLYEIGAGTSEVRRLLVIGRAFNADFH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8057\\_b02.zip](https://cdn.origene.com/chromatograms/mk8057_b02.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001159508

**ORF Size:** 1188 bp

**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. [More info](#)

**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:**

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\\_001159508.1](#), [NP\\_001152980.1](#)

**RefSeq ORF:** 1182 bp

**Locus ID:** 3712

**UniProt ID:** [P26440](#)

**Cytogenetics:** 15q15.1

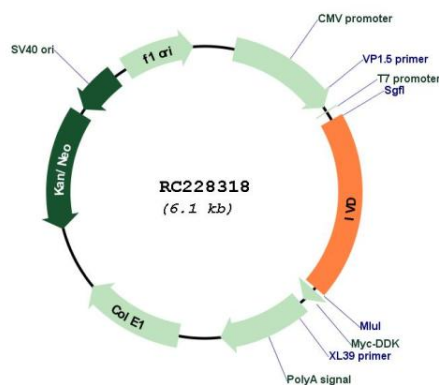
**Protein Families:** Druggable Genome

**Protein Pathways:** Metabolic pathways, Valine, leucine and isoleucine degradation

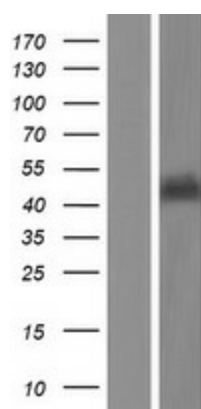
**MW:** 42.9 kDa

**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]

### Product images:



Circular map for RC228318



Western blot validation of overexpression lysate (Cat# [LY431346]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC228318 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).