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**Product Data Sheet**


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Product Name: IVD Human  
 Cat. No.: GP21832  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	FLJ12715; isovaleryl-CoA dehydrogenase mitochondrial; FLJ34849; EC 1.3.99.10; IVD; ACAD2.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MHSLLPVDDA INGLSEEQRQ LRQTMAKFLQ EHLAPKAQEI DRSNEFKNLR EFWKQLGNLG VLGITAPVQY GGSGLGYLEH VLMEEISRA SGAVGLSYGA HSNLCINQLV RINGNEAQKEK YLPKLISGEY IGALAMSEPN AGSDVSMKL KAEKKGNYHI LNGNKFWITN GPDADVLIVY AKTDLAAVPA SRGITAFIVE KGMPGFSTSK KLDKLGMRGS NTCELIFEDC KIPAANILGH ENKGVYVLS GDLRLVLA GGPLGLMQAV LDHTIPYLHV REAFGQKIGH FQLMQGKMAD MYTRLMACRQ YVYNVAKACD EGHCTAKDCA GVILYSAECA TQVALDGIQC FGGNGYINDF PMGRFLRDAK LYEIGAGTSE VRRLVIGRAF NADFH.		
Formulation	The IVD protein solution (1mg/ml) contains 20mM Tris-HCl pH-8, 1mM DTT and 10% glycerol.		

**Introduction**

IVD is a mitochondrial matrix enzyme that is part of the cyl-CoA dehydrogenase family which catalyzes the third step in leucine catabolism. The genetic deficiency of IVD leads to a buildup of isovaleric acid, which is toxic to the central nervous system and results in isovaleric acidemia. IVD is a homotetrameric flavoenzyme which catalyzes the conversion of isovaleryl-CoA to 3-methylcrotonyl-CoA.

**Stability**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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### Background

IVD Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 415 amino acids (33-426 a.a.) and having a molecular mass of 45.3 kDa. The IVD is fused to a 20 amino acid his tag at N-terminus and purified by conventional chromatography.

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