# Ketol-Acid Reductoisomerase (ilvC) Vibrio Cholerae Serotype O1 Recombinant Protein

## PRODUCT OVERVIEW

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| **Product Name** | Ketol-acid reductoisomerase (ilvC), Recombinant Protein |
| **Full Product Name** | Recombinant Vibrio cholerae serotype O1 Ketol-acid reductoisomerase (ilvC) |
| **Product Gene Name** | ilvC recombinant protein |
| **Product Synonym Gene Name** | ilvC |
| **Sequence** | MANYFNTLNL REQLDQLGRC RFMAREEFAT EADYLKGKKV VIVGCGAQGL NQGLNMRDSG LDVSYALRQA AIDEQRQSFK NAKNNGFNVG SYEQLIPTAD LVINLTPDKQ HTSVVNAVMP LMKQGAALGY SHGFNIVEEG MQIRKDITVV MVAPKCPGTE VREEYKRGFG VPTLIAVHPE NDPQGEGWEI AKAWAAATGG HRAGCLASSF VAEVKSDLMG EQTILCGMLQ AGSIVCYEKM VADGIDPGYA GKLLQFGWET ITEALKFGGI THMMDRLSNP AKIKAFELSE ELKDLMRPLY NKHMDDIISG HFSSTMMADW ANDDKDLFGW RAETAETAFE NYPTTDVKIA EQEYFDNGIL MIAMVRAGVE LAFEAMTASG IIDESAYYES LHELPLIANT VARKRLYEMN VVISDTAEYG NYLFANVAVP LLREKFMPKV GTDVIGKGLG VVSNQVDNAT LIEVNSIIRN HPVEYIGEEL RGYMKDMKRI AVGD |
| **Host** | E Coli or Yeast or Baculovirus or Mammalian Cell |
| **Form/Format** | Lyophilized or liquid (Format to be determined during the manufacturing process) |
| **Purity/Purification** | Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific) |
| **Preparation and Storage** | Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended. |
| **Molecular Weight** | 54,612 Da |
| **Sequence Positions** | 1-494, Full length |
| **Tag Information** | This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information. |
| **Sterility** | Sterile filter available upon request. |
| **Endotoxin** | Low endotoxin available upon request. |
| **3D Structure** | ModBase 3D Structure for Q9KVI4 |
| **Species** | Vibrio cholerae serotype O1 (strain 39315 / El Tor Inaba N16961) |
| **ISO Certification** | Manufactured in an ISO 9001:2015 Certified Laboratory. |
| **Related Product Information for ilvC recombinant protein** | MBS1343237 is a recombinant protein targeting ilvC. Also known as Recombinant Vibrio cholerae serotype O1 Ketol-acid reductoisomerase (ilvC). Host: E Coli or Yeast or Baculovirus or Mammalian Cell. |
| **Other Notes** | Small volumes of ilvC recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ilvC. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 15640192 |
| **NCBI GeneID** | 2614429 |
| **NCBI Accession #** | NP_229819.1 |
| **UniProt Primary Accession #** | Q9KVI4 |

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| **UniProt Related Accession #** | Q9KVI4 |
| **GenBank Nucleotide #** | NC_002505.1 |
| **NCBI Official Full Name** | ketol-acid reductoisomerase |
| **NCBI Official Symbol** | VC0162 |
| **UniProt Protein Name** | Ketol-acid reductoisomerase (NADP(+)) |
| **UniProt Synonym Protein Names** | Acetohydroxy-acid isomeroreductase |
| **Protein Family** | Ketol-acid reductoisomerase |
| **UniProt Gene Name** | ilvC |
| **UniProt Synonym Gene Names** | KARI; AHIR |
| **NCBI Protein Information** | ketol-acid reductoisomerase |
| **UniProt Comments for ilvC** | Involved in the biosynthesis of branched-chain amino acids (BCAA). Catalyzes an alkyl-migration followed by a ketol-acid reduction of (S)-2-acetolactate (S2AL) to yield (R)-2,3-dihydroxy-isovalerate. In the isomerase reaction, S2AL is rearranged via a Mg-dependent methyl migration to produce 3-hydroxy-3-methyl-2-ketobutyrate (HMKB). In the reductase reaction, this 2-ketoacid undergoes a metal-dependent reduction by NADPH to yield (R)-2,3-dihydroxy-isovalerate. |
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