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32-6761: GLDA E.coli, Active

Application : Functional Assay
Alternative Name : ECK3937, JW5556, Glycerol dehydrogenase, GDH, GLDH, b3945.

Description

Source: Escherichia Coli.
Sterile Filtered colorless solution.
Glycerol dehydrogenase (GldA) catalyzes the NAD-dependent oxidation of glycerol to dihydroxyacetone (glycerone). The GldA protein allows microorganisms to use glycerol as a Source: of carbon under anaerobic conditions. Furthermore, in E.coli GldA has an imperative role by regulating the intracellular level of dihydroxyacetone by catalyzing the reverse reaction, i.e. the conversion of dihydroxyacetone into glycerol. GldA possesses an extensive substrate specificity, due to its ability to oxidize 1,2-propanediol and to reduce glycolaldehyde, methylglyoxal and hydroxyacetone into ethylene glycol, lactaldehyde and 1,2-propanediol, respectively.
GLDA E.coli Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 390 amino acids (1-367 a.a) and having a molecular mass of 41.1kDa. GLDA is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

Product Info

Amount :	2 µg / 10 µg
Purification :	Greater than 95.0% as determined by SDS-PAGE.
Content :	GLDA protein solution (1mg/ml) containing Phosphate buffered saline (pH7.4) and 10% glycerol.
Storage condition :	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.
Amino Acid :	MGSSHHHHHH SSGLVPRGSH MGSMDRIIQS PGKYIQGADV INRLGEYLKP LAERWLVVGD KFVLGFAQST VEKSFKDAGL VVEIAPFGGE CSQNEIDRLR GIAETAQCGA ILGIGGGKTL DTAKALAHFM GVPVAIAPTI ASTDAPCSAL SVIYTDEGEF DRYLLLPNNP NMVIVDTKIV AGAPARLLAA GIGDALATWF EARACSRSGA TTMAGGKCTQ AALALAELCY NTLLEEGEKA MLAAEQHVVT PALERVIEAN TYLSGVGFES GGLAAAHAVH NGLTAIPDAH HYYHGEKVAF GTLTQLVLEN APVEEIETVA ALSHAVGLPI TLAQLDIKED VPAKMRIVAE AACAEGETIH NMPGGATPDQ VYAALLVADQ YGQRFLQEWE.

Application Note

Specific activity: > 14 Units/ml. One unit will oxidize 1.0 umole of glycerol to dihydroxyacetone per minute at pH 8.0 at 25C.