

## Product datasheet for AR51950PU-N

## gldA (1-367, His-tag) Escherichia coli Protein

**Product data:** 

**Product Type: Recombinant Proteins** 

**Description:** gldA (1-367, His-tag) recombinant protein, 0.1 mg

Species: Escherichia coli

**Expression Host:** E. coli

**Expression cDNA Clone** 

MGSSHHHHHH SSGLVPRGSH MGSMDRIIQS PGKYIQGADV INRLGEYLKP LAERWLVVGD KFVLGFAQST VEKSFKDAGL VVEIAPFGGE CSQNEIDRLR GIAETAQCGA ILGIGGGKTL or AA Sequence:

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

Tag: His-tag

Predicted MW: 41.1 kDa

Concentration: lot specific

>95% by SDS - PAGE **Purity:** 

**Buffer:** Presentation State: Purified

State: Liquid purified protein

Buffer System: Phosphate buffered saline (pH 7.4), 10% glycerol

Specific: > 14 Units/ml One unit will oxidize 1.0 umole of glycerol to dihydroxyacetone per **Bioactivity:** 

minute at pH 8.0 at 25C

Liquid purified protein Preparation:

**Applications:** Protocol: 1. Prepare a 200ul reaction mix into a suitable container: The final concentrations

> are 93mM Glycine, 93mM Potassium chloride, 2375mM Glycerol, 3mM b-NAD. 2. Equilibrate to 25C and monitor at A340nm until the value is constant using a

spectrophotometer.

3. Add 20ul of recombinant gldA protein with various concentrations (0.2ug, 0.1ug, 0.05ug) in

180ul reaction buffer.

4. Mix by inversion and record the decrease at A340nm for 10 minutes.



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**Protein Description:** Recombinant E. coli gldA protein, fused to His-tag at N-terminus, was expressed in E.coli and

purified by using conventional chromatography techniques.

Storage: Store undiluted at 2-8°C for one week or (in aliquots) at -20°C to -80°C for longer.

Avoid repeated freezing and thawing.

**Stability:** Shelf life: one year from despatch.

Synonyms: Glycerol dehydrogenase, ECK3937, JW5556

**Summary:** gldA catalyzes the NAD-dependent oxidation of glycerol to dihydroxyacetone (glycerone). This

protein allows microorganisms to utilize glycerol as a source of carbon under anaerobic conditions. In E.coli, an important role of GldA is also likely to regulate the intracellular level

of dihydroxyacetone by catalyzing the reverse reaction, i.e. the conversion of

dihydroxyacetone into glycerol. gldA possesses a broad substrate specificity, since it is also

able to oxidize 1,2-propanediol and to reduce glycolaldehyde, methylglyoxal and hydroxyacetone into ethylene glycol, lactaldehyde and 1,2-propanediol, respectively.

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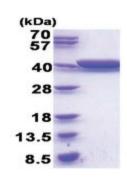
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## **Product images:**



15% SDS-PAGE (3ug)