Recombinant human GNPDA1 protein

Catalog Number: ATGP0701

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-289aa

UniProt No.
P46926

NCBI Accession No.
NP_005462

Alternative Names
Glucosamine-6-phosphate isomerase 1, GNP1, GNPDA, GNPI, GPI, HLN, Oscillin

PRODUCT SPECIFICATION

Molecular Weight
34.8 kDa (309aa) confirmed by MALDI-TOF

Concentration
1mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 20% glycerol, 50mM NaCl

Purity
> 90% by SDS-PAGE

Tag
His-Tag

Application
SDS-PAGE

Storage Condition
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description
Glucosamine-6-phosphate isomerase 1, also known as GNPDA1, catalyzes the conversion of glucosamine-6-phosphate to fructose-6-phosphate, a reaction that under physiological conditions proceeds to the formation of fructose-6-phosphate. It exist is ubiquitously expressed with highest expression in testes, ovary and heart. In addition, GNPDA1 triggers calcium oscillations in mammalian eggs. These oscillations serve as the essential trigger for egg activation and early development of the embryo. Recombinant human GNPDA1 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

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Amino acid Sequence

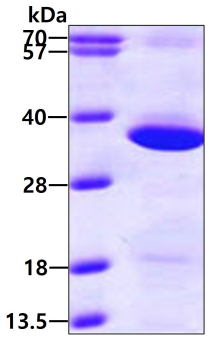
<MGSSHHHHHH SSGLVPRGSH> MKLIILEHYS QASEWAAKYI RNRIIQFNPG PEKYFTLGLP TGSTPLGCYK KLIEYYKNGD LSFKYVKTFN MDEYVGLPRD HPESYHSFMW NNFFKHIDIH PENTHILDGN AVDLQAECDA FEEKIKAAGG IELFVGGIGP DGHIAFNEPG SSLVSRTRVK TLAMDTILAN ARFFDGELTK VPTMALTVGV GTVMDAREVM ILITGAHKAF ALYKAIEEGV NHMWTVSAFQ QHPRTVFVCD EDATLELKVK TVKYFKGLML VHNKLVDPLY SIKEKETEKS QSSKKPYSD

General References

Wolosker H., et al. (1998) FASEB J. 12(1):91-9.
Montag M., et al. (1999) FEBS Lett.458:141-144.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.