# Recombinant Human Glucosamine-6-phosphate isomerase 1 (GNPDA1)

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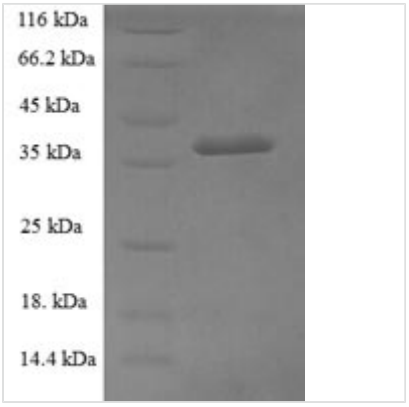
| **Product Code** | CSB-EP009630HU |
| **Relevance** | Ses to trigger calcium oscillations in mammalian eggs. These oscillations serve as the essential trigger for egg activation and early development of the bryo . |
| **Abbreviation** | Recombinant Human GNPDA1 protein |
| **Storage** | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C. |
| **Uniprot No.** | P46926 |
| **Alias** | Glucosamine-6-phosphate deaminase 1 ;GNPDA 1 ;GlcN6P deaminase 1Oscillin |
| **Product Type** | Recombinant Protein |
| **Immunogen Species** | Homo sapiens (Human) |
| **Purity** | Greater than 90% as determined by SDS-PAGE. |
| **Sequence** | MKLIILEHYSQASEWAAKYIRNRIIQFNPGPEKYFTLGLPTGSTPLGCYKKLIEYY KNGDLSFKYVKTFNMDEYVGLPRDHPESYHSFMWNNFFKHIDIHPENTHILDG NAVDLQAECDAFEEKIKAAGGIELFVGGIGPDGHIAFNEPGSSLVSRTRVKTLA MDTILANARFFDGELTKVPTMALTVGVGTVMDAREVMILITGAHKAFALYKAIEE GVNHMWTVSAFQQHPRTVFVCDEDATLELKVKTVKYFKGLMLVHNKLVDPLY SIKEKETEKSQSSKKPYSD |
| **Research Area** | Metabolism |
| **Source** | E.coli |
| **Target Names** | GNPDA1 |
| **Expression Region** | 1-289aa |
| **Notes** | Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week. |
| **Tag Info** | N-terminal 6xHis-tagged |
| **Mol. Weight** | 36.7kDa |
| **Protein Length** | Full Length |
| **Image** | |




(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

## Description

This Human GNPDA1 recombinant protein was produced in E.coli, where the gene sequence encoding Human GNPDA1 (1-289aa) was expressed with the N-terminal 6xHis tag. The purity of this GNPDA1 protein was greater than 90% by SDS-PAGE.
Glucosamine-6-phosphate isomerase 1 (GNPDA1) is an enzyme that is involved in energy metabolism. It has been studied in the context of hepatocellular carcinoma (HCC), a type of liver cancer. High expression of GNPDA1 has been found to be associated with advanced tumor stage, TNM stage, and grade in HCC patients. In HCC cells, GNPDA1 promotes proliferation, migration, and invasion, while inhibiting apoptosis. This suggests that GNPDA1 may serve as a prognostic biomarker and potential therapeutic target for HCC.

Reference:
Li D, Cheng X, Zheng W, Chen J. Glucosamine-6-Phosphate Isomerase 1 Promotes Tumor Progression and Indicates Poor Prognosis in Hepatocellular Carcinoma. Cancer Manag Res. 2020 Jun 24;12:4923-4935.

## Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

## Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.
Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.