

Human AGO1 / Argonaute 1 / EIF2C1 Protein (His Tag)

Catalog Number: 11225-H07B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

EIF2C1; EIF2C1; GERP95; Q99

Protein Construction:

A DNA sequence encoding the full length of human AGO1 (NP_036331.1) (Met 1-Ala 857) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 85% as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: His

Molecular Mass:

The recombinant human AGO1 consists of 875 amino acids and predicts a molecular mass of 99.5 kDa as estimated in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 100mM NaCl, 10% Gly, 0.5 PMSF, 0.5mM EDTA, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

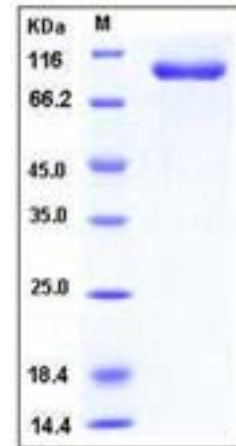
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Protein argonaute-1, also known as eukaryotic translation initiation factor 2C 1, EIF2C1, and AGO1, is a member of the argonaute family and ago subfamily. Protein argonaute-1 in humans is encoded by the EIF2C1 gene. This gene is located on chromosome 1 in a cluster of closely related family members including argonaute 3, and argonaute 4. This genomic region is frequently lost in human cancers such as Wilms tumors, neuroblastoma, and carcinomas of the breast, liver, and colon. The human EIF2C1 gene is ubiquitously expressed at low to medium levels. Differential polyadenylation and splicing result in a complex transcriptional pattern. EIF2C1 protein contains onePAZ domain and onePiwi domain. It is required for RNA-mediated gene silencing (RNAi) and transcriptional gene silencing (TGS) of promoter regions which are complementary to bound short antigenic RNAs (agRNAs). EIF2C1 binds to short RNAs such as microRNAs (miRNAs) or short interfering RNAs (siRNAs), and represses the translation of mRNAs which are complementary to them.

References

1. Koesters R., *et al.*, (1999), Human eukaryotic initiation factor EIF2C1 gene: cDNA sequence, genomic organization, localization to chromosomal bands 1p34-p35, and expression. *Genomics* 61:210-218.
2. Gregory S.G., *et al.*, (2006), The DNA sequence and biological annotation of human chromosome 1. *Nature* 441:315-321.
3. Motamedi M.R., *et al.*, (2004), Two RNAi complexes, RITS and RDRC, physically interact and localize to noncoding centromeric RNAs. *Cell*. 119:789-802.

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For US Customer: Fax: 267-657-0217 • Tel: 215-583-7898

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