

## AGO1 Protein, Human (sf9, His)

Cat. No.:	HY-P74424
Synonyms:	Protein argonaute-1; hAgo1; Argonaute-1; eIF-2C 1; EIF2C1
Species:	Human
Source:	Sf9 insect cells
Accession:	Q9UL18 (M1-A857)
Gene ID:	26523
Molecular Weight:	Approximately 99.5 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution of 50 mM Tris, 100 mM NaCl, 10% Gly, 0.5 PMSF, 0.5 mM EDTA, pH 8.0. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	AGO1, a pivotal component in RNA-mediated gene silencing (RNAi), functions by binding to short RNAs such as microRNAs (miRNAs) or short interfering RNAs (siRNAs), thereby orchestrating the repression of mRNA translation through complementary base pairing. Notably, AGO1 lacks endonuclease activity, diverging from its counterparts, and does not participate in the cleavage of target mRNAs. Beyond post-transcriptional gene silencing, AGO1 is instrumental in transcriptional gene silencing (TGS), acting on promoter regions that exhibit complementarity to the bound short antigenic RNAs (agRNAs). Its extensive network of molecular interactions involves key players such as DDB1, DDX5, DDX6, DHX30, DHX36, DDX47, DICER1, AGO2, ELAVL1, HNRNPF, IGF2BP1, ILF3, IMP8, MATR3, MOV10, PABPC1, PRMT5, RBM4, SART3, TNRC6B, UPF1, YBX1, LIMD1, WTIP, AJUBA, APOBEC3F, APOBEC3G, and APOBEC3H. Moreover, AGO1's association with polysomes and messenger ribonucleoproteins (mRNPs) emphasizes its integral role in the dynamic regulation of gene expression at various stages.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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