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Datasheet for ABIN7194308
AGO2 Protein (His tag)

Overview

Quantity:	100 µg
Target:	AGO2
Origin:	Human
Source:	Baculovirus infected Insect Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This AGO2 protein is labelled with His tag.

Product Details

Purpose:	Recombinant Human AGO2/Argonaute 2/EIF2C2 Protein (His Tag)(Active)
Sequence:	Met 1-Ala 859
Characteristics:	A DNA sequence encoding the full length of human AGO2 (NP_036286.2) (Met 1-Ala 859) was expressed with a polyhistidine tag at the N-terminus.
Purity:	> 85 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg as determined by the LAL method.
Biological Activity Comment:	Human AGO2 can bind Let-7a RNA and cleave target RNA (21nt).

Target Details

Target:	AGO2
Alternative Name:	AGO2/Argonaute 2/EIF2C2 (AGO2 Products)

Target Details

Background: Background: Argonaute 2 (AGO2), also known as Eukaryotic translation initiation factor 2C2 (EIF2C2), belongs to the Argonaute family, AGO subfamily, which is a component of the RNA-induced silencing complex (RISC) and mediates small interfering RNA (siRNA)-directed mRNA cleavage and microRNA translational suppression. AGO2 protein is the catalytic engine of mammalian RNAi. It contains a PIWI domain that is structurally related to RNases H and possibly shares with them a two-metal-ion catalysis mechanism. Human AGO2 was unable to cleave preformed RNA duplexes and exhibited weaker binding affinity for RNA duplexes compared with the single strand RNA. The enzyme exhibited greater RNase H activity in the presence of Mn²⁺ compared with Mg²⁺. Human AGO2 exhibited weaker binding affinities and reduced cleavage activities for antisense RNAs with either a 5'-terminal hydroxyl or abasic nucleotide. In mouse hematopoiesis, AGO2 controls early development of lymphoid and erythroid cells. AGO2 is a highly specialized member of the Argonaute family with an essential nonredundant Slicer-independent function within the mammalian miRNA pathway. AGO2 regulates dFMR1 expression, and the relationship between dFMR1 and AGO2 was defined by their physical interaction and co-regulation of downstream targets. AGO2 and dFMR1 are also connected through a regulatory relationship. AGO2 is a regulator of dFMR1 expression and have clarified an important developmental role for AGO2 in the nervous system and germ line that requires dFMR1 function. In addition, AGO2 is regulated at both the transcriptional and posttranslational level, and also implicate AGO2 and enhanced micro-RNA activity in the tumorigenic progression of breast cancer cell lines.

Synonym: Argonaute 2,EIF2C2,Q10

Molecular Weight: 99 kDa

NCBI Accession: [NP_036286](#)

Pathways: [Fc-epsilon Receptor Signaling Pathway](#), [Regulatory RNA Pathways](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Ribonucleoprotein Complex Subunit Organization](#)

Application Details

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: Please refer to the printed manual for detailed information.

Buffer: Lyophilized from sterile 20 mM Tris, 500 mM NaCl, pH 7.4, 10 % glycerol, 2 mM DTT

Handling

Storage: 4 °C,-20 °C,-80 °C

Storage Comment: Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.