Recombinant AGO2 protein

Catalog No: 31486, 31886
Lot No: 07315001
Expressed In: Baculovirus

Quantity: 20, 1000 µg
Concentration: 0.4 µg/µl
Source: Human

Buffer Contents: Full length recombinant AGO2 protein expressed in Sf9 cells and is provided in 25 mM HEPES, pH 7.5, 500 mM NaCl, 5% glycerol, 0.04% Triton X-100, 0.2 mM TCEP and 0.2 mg/ml 3X FLAG peptide.

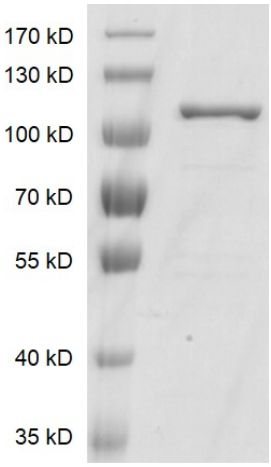
Background: AGO2 (Argonaute RISC Catalytic Component 2, also known as Q10; EIF2C2) is a member of the Argonaute family of proteins which play a role in RNA interference. This process is important both in gene regulation by microRNAs and in defense against viral infections. The RNA-induced silencing complex, or RISC, is a multiprotein complex that includes argonaute proteins and one strand of a small interfering RNA (siRNA) or microRNA (miRNA). RISC uses the siRNA or miRNA as a template for recognizing complementary mRNA. When it recognizes a complementary strand, it activates AGO2 to cleave the mRNA. The precise mechanism of gene silencing depends on the degree of complementarity between the miRNA or siRNA and its target. Binding of RISC to a perfectly complementary mRNA generally results in silencing due to endonucleolytic cleavage of the mRNA specifically by AGO2. Binding of RISC to a partially complementary mRNA results in silencing through inhibition of translation, and this is independent of endonuclease activity. In some cases, RISC-mediated translational repression is also observed for miRNAs that perfectly match the 3' untranslated region (3'UTR). In addition, AGO2 can also up-regulate the posttranscriptional upregulation of specific mRNAs under certain growth conditions.

Protein Details: Recombinant AGO2 (accession number NP_036286.2) was expressed in Sf9 cells and contains an N-terminal FLAG-Tag with an observed molecular weight of 104 kDa. The recombinant protein is >90% pure by SDS-PAGE.

Application Notes: Recombinant AGO2 is suitable for use in the study of miRNA screening, RNAi research and selectivity profiling.

Specific Activity: RNA endonuclease activity.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.



Recombinant AGO2 protein gel.
AGO2 protein was run on an SDS-PAGE gel and stained with Coomassie blue.