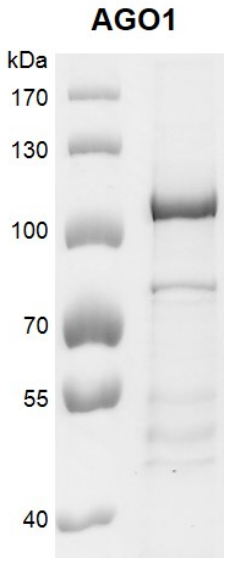
Recombinant AGO1 protein

Catalog No: 31522, 31922
Lot No: 07315001
Expressed In: Baculovirus
Quantity: 20 µg
Concentration: 0.3 µg/µl
Source: Human

Buffer Contents: Recombinant full length AGO1 protein was expressed in Sf9 cells at a concentration of 0.3 µg/µl in 25 mM Tris pH 8.0, 300 mM NaCl, 5% glycerol, 0.04% Triton X-100, 0.2 mg/ml 3X Flag peptide.

Background: AGO1 (argonaute RISC catalytic component 1, also known as Q99; EIF2C1) is a member of the Argonaute family of proteins which play a role in RNA interference. The Argonaute family proteins (AGO1, AGO2, AGO3 and AGO4) are involved in RNAi mediated gene silencing through siRNA and miRNA effectors. The Argonaute proteins are part of RISC, the RNAi Induced Silencing Complex. RISC uses the siRNA or miRNA as a template for recognizing complementary mRNA. When it recognizes a complementary strand, it activates AGO2 to cleaves 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). AGO1 is non-essential for siRNA-directed target RNA cleavage but is needed for the production of mature miRNA that affects miRNA-directed RNA cleavage. Argonaute family proteins contain a PAZ and a PIWI domain.



Recombinant AGO1 protein gel.
AGO1 protein was run on an 8% SDS-PAGE gel and stained with Coomassie Blue.

Protein Details: Recombinant human AGO1 was expressed in a baculovirus expression system as the full length protein (accession number NP_036331.1) with an N-terminal FLAG tag. The molecular weight of the protein is 100.2 kDa. The purity of AGO1 protein is >75% pure by SDS-PAGE.

Application Notes: Recombinant AGO1 is suitable for use in the study of miRNA screening, RNAi research and selectivity profling.

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 guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.