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Product Information

Anti-AGO2 antibody, Mouse monoclonal
clone AGO2-10, purified from hybridoma cell culture

Product Number **SAB4200724**

Product Description

Anti-AGO2 antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the AGO2-10 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a BALB/c mouse immunized with synthetic peptide from the C-terminal region of human AGO2 protein, conjugated to KLH (GeneID: 27161). The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-AGO2 antibody specifically recognizes human AGO2. Monoclonal Anti-AGO2 is recommended to use in various immunochemical assays, including Immunoblotting (~95 kDa) and Immunoprecipitation. AGO2 is also known as Protein Argonaute 2, Argonaute RISC catalytic component 2, Eukaryotic translation initiation factor 2C 2 (eIF2C2), PAZ Piwi domain protein (PPD). It is a member of the Argonoute protein family which plays a central role in RNA silencing processes as essential catalytic components of the RNA-induced silencing complex (RISC). The Argonaute proteins are evolutionarily conserved between species and have been implicated in both transcriptional and post-transcriptional gene silencing. The Ago proteins are ubiquitously expressed and bind to siRNAs or miRNAs guiding gene silencing.
In human, the Ago subfamily consists of hsAGO1–4 (also known as eIF2C1-4). Ago proteins localize to the cytoplasm of somatic cells and are concentrated in cytoplasmic processing bodies.[1-2] Of the four human Ago proteins only one member of this group, AGO2, was found to have endonuclease activity that cleaves the target RNA in RNAi.[3-4] Furthermore, AGO2 was found to be regulated at both the transcriptional and post-translational level in human breast cancer cell lines and was also implicated together with enhanced micro-RNA activity in the tumorigenic progression of breast cancer cell lines.[5] AGO2 has an important role in stabilization of circulating microRNAs (miRNAs) in exosomes from extracellular body fluids.[6] Circulating miRNAs had been described as a promising biomarkers for a broad spectrum of diseases, hence, Anti-AGO2 antibodies may be a useful tool for Immunoprecipitation of circulating miRNAs.[7]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2–4 μg/mL is recommended using extract of HEK-293T cells transfected with human AGO2.

Immunoprecipitation: a working concentration of 10–20 μg/test is recommended using HeLa cells extract.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. Hock J. and Meister G., *Genome Biol.*, **9**, 210.1-210.8 (2008).
2. Peters L. and Meister G., *Mol Cell*, **26**, 611-23 (2007).
3. Liu J., et al., *Science*, **305**, 1437-41 (2004).
4. Meister G., et al., *Mol Cell*, **15**, 185-97 (2004).
5. Adams BD., et al., *Endocrinology.*., **150**, 14-23 (2009).

6. Wu SC., et al., *PLoS One.*, **8**, e77936 (2013).

7. Turchinovich A., et al., *Methods Mol Biol.*, **1024**, 97-107 (2013).

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