

Product Information

Monoclonal Anti-AGO2

Clone 11A9, produced in rat
purified immunoglobulin

Product Number **SAB4200085**

Product Description

Monoclonal Anti-AGO2 (rat IgG2a isotype) is derived from the hybridoma 11A9 produced by the fusion of mouse myeloma cells (P3X63Ag8.653) and splenocytes from rats immunized with a peptide corresponding to a fragment of human AGO2 (GeneID: 27161).¹ The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-AGO2 recognizes human, monkey, bovine, rat, and mouse AGO2. The product may be used in several immunochemical techniques including immunoblotting (~85 kDa), immunoprecipitation, and immunocytochemistry.¹

The Argonaute proteins are evolutionarily conserved between species and have been implicated in both transcriptional and post-transcriptional gene silencing. This family of proteins can be subdivided into the Ago subfamily and the Piwi subfamily. The Ago proteins are ubiquitously expressed and bind to siRNAs or miRNAs to guide gene silencing, whereas the Piwi proteins expression is restricted mostly to the germ line.

Argonaute proteins have a molecular mass of ~100 kDa and are characterized by piwi-argonaute-zwille (PAZ) and PIWI domains. In humans, the Ago subfamily consists of hAgo1–4 (also known as EIF2C1–4). Ago proteins localize to the cytoplasm of somatic cells and are concentrated in cytoplasmic processing bodies.^{2–3} 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.^{4–5} 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.⁶

Reagent

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

Antibody concentration: ~1.5 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –20 °C. For continuous use, the product may be stored at 2–8 °C for up to one month. For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, 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 antibody concentration of 0.5–1.0 µg/mL is recommended using HeLa cell extracts.

Notes: Cell lysates should **not** be boiled before loading onto SDS-PAGE, but only warmed to 60 °C for 15 minutes.

In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Rüdel, S., et al., *RNA*, **14**, 1244–1253 (2008).
2. Hock, J., and Meister, G., *Genome Biol.*, **9**, 210.1–210.8 (2008).
3. Peters, L., and Meister, G., *Mol. Cell*, **26**, 611–623 (2007).
4. Liu, J., et al., *Science*, **305**, 1437–1441 (2004).
5. Meister, G., et al., *Mol. Cell*, **15**, 185–197 (2004).
6. Adams, B.D., et al., *Endocrinol.*, **150**, 14–23 (2009).

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