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Product Information

Monoclonal Anti-AGO1, clone 4B8
produced in rat, purified immunoglobulin

Catalog Number **SAB4200084**

Product Description

Monoclonal Anti-AGO1 (rat IgG2a isotype) is derived from the hybridoma 4B8 produced by the fusion of mouse myeloma cells (P3X63Ag8.653) and splenocytes from rat immunized with a recombinant human AGO1 (GeneID: 26523) fusion protein.[1] The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-AGO1 recognizes human, monkey, bovine, dog and mouse AGO1. The product may be used in several immunochemical techniques including immunoblotting (~ 95 kDa) and immunoprecipitation.[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 weight of about 100 kDa and are characterized by piwi-argonaute-zwille (PAZ) and PIWI domains. 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. A member of this group, Ago1 is also known to be associated with Golgi and with endoplasmic reticulum. The gene is located on chromosome 1 in a cluster of closely related family members including Ago 3, and Ago 4. Interestingly, this region is often lost in Wilms' tumors, which are hypothesized to be caused by defects in embryonic kidney development that disturb the capacity of metanephrogenic precursor cells to differentiate. Notably, EIF2C1/hAgo1 is expressed in low to medium levels in most tissues, but its expression is particularly high in embryonic kidney and lung. EIF2C1 levels are also increased in tumors that lack the Wilm's tumor suppressor gene WT1.[2-4]

Reagent

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 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 dilution of 1-2 µg/mL is recommended using HEK-293T cell extracts.

Note.
In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Beitzinger, M., et al., *RNA Biol.,* **4**, 76-84 (2007).
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. Carmell, M.A., et al., *Genes Dev.,* **16**, 2733-2742 (2002).

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