

Anti-Argonaute 2 (N-terminus) Antibody

Catalog # AN1635

Specification

Anti-Argonaute 2 (N-terminus) Antibody - Product Information

Primary Accession Host Clonality Isotype Calculated MW <u>O9UKV8</u> Rat Rat Monoclonal IgG2a 97208

27161

Anti-Argonaute 2 (N-terminus) Antibody - Additional Information

Gene ID Other Names Ago2, Argonaute, eIF-2C2, eIF2C2; protein slicer

Target/Specificity

Several classes of small RNAs, including short interfering RNAs (siRNAs), microRNAs (miRNAs), and Piwi-interacting RNAs (piRNAs) have been identified. MicroRNAs are about 21 nucleotides in length and have been implicated in many cellular processes such as development, differentiation, and stress response. These small RNAs function together with complexes called micro-ribonucleoproteins (miRNPs) to regulate gene expression by modulating mRNA translation or stability. Among the most important components in these complexes are argonaute proteins. There are four members in the mammalian argonaute family and only argonaute 2 (Ago2) possesses the Slicer endonuclease activity. Argonaute proteins participate in various steps of microRNA-mediated gene silencing, such as repression of translation and mRNA turnover. These activities may be regulated by cell signaling events that alter argonaute phosphorylation. EGFR phosphorylates Tyr-393 in Ago2, which reduces binding to Dicer and inhibits miRNA processing. Akt3 phosphorylates Ago2 at Ser-387 leading to reduced mRNA cleavage and enhanced translational repression.

Format Protein G Purified

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Anti-Argonaute 2 (N-terminus) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping Blue Ice

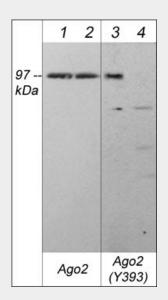
Anti-Argonaute 2 (N-terminus) Antibody - Protocols



Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- <u>Blocking Peptides</u>
- <u>Dot Blot</u>
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

Anti-Argonaute 2 (N-terminus) Antibody - Images



Western blot analysis of human A431 cells treated with EGF (100 ng/ml for 60 min.) (lanes 1-4). The blot was treated with lambda phosphatase (lanes 2 & 4) then probed with rat monoclonal anti-Ago2 (AM5271) (lanes 1 & 2) and rabbit polyclonal anti-Ago2 (Tyr-393) phospho-specific antibody (lanes 3 & 4).

Anti-Argonaute 2 (N-terminus) Antibody - Background

Several classes of small RNAs, including short interfering RNAs (siRNAs), microRNAs (miRNAs), and Piwi-interacting RNAs (piRNAs) have been identified. MicroRNAs are about 21 nucleotides in length and have been implicated in many cellular processes such as development, differentiation, and stress response. These small RNAs function together with complexes called

micro-ribonucleoproteins (miRNPs) to regulate gene expression by modulating mRNA translation or stability. Among the most important components in these complexes are argonaute proteins. There are four members in the mammalian argonaute family and only argonaute 2 (Ago2) possesses the Slicer endonuclease activity. Argonaute proteins participate in various steps of microRNA-mediated gene silencing, such as repression of translation and mRNA turnover. These activities may be regulated by cell signaling events that alter argonaute phosphorylation. EGFR phosphorylates Tyr-393 in Ago2, which reduces binding to Dicer and inhibits miRNA processing. Akt3 phosphorylates Ago2 at Ser-387 leading to reduced mRNA cleavage and enhanced translational repression.