

Product datasheet for **TA389054**

AGO2 Rat Antibody [Clone ID: 11A9]

Product data:

Product Type:	Primary Antibodies
Clone Name:	11A9
Applications:	WB
Recommended Dilution:	WB: 1:250
Reactivity:	Human, Bovine
Host:	Rat
Isotype:	IgG2a
Immunogen:	Clone 11A9 was generated from an Ago2 synthetic peptide (coupled to KLH) corresponding to amino acids in the N-terminus of human Ago2. This sequence has low homology to other argonaute family members.
Specificity:	The antibody detects a 97 kDa* protein corresponding to the apparent molecular mass of Ago2 on SDS-PAGE immunoblots of several human cell lines, A431, HeLa, MCF-7, and K562. The antibody does not detect rat or mouse Ago2, but will detect bovine Ago2.
Formulation:	PBS + 0.05% NaN3
Concentration:	lot specific
Purification:	Protein G Purified
Conjugation:	Unconjugated
Storage:	Recommended that the undiluted antibody be aliquoted into smaller working volumes (10-30 uL/vial depending on usage) upon arrival and stored long term at -20° C or -80° C, while keeping a working aliquot stored at 4° C for short term. Avoid freeze/thaw cycles. Stable for at least 1 year.
Stability:	After date of receipt, stable for at least 1 year at -20°C.
Predicted Protein Size:	97
Database Link:	Q9UKV8



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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.

Note:

Protein G purified tissue culture supernatant.