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## Argonaute 4 (D10F10) Rabbit mAb

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, IP	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 97	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q9HCK5	<b>Entrez-Gene Id:</b> 192670
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### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation

#### Dilution

1:1000  
1:50

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### Specificity/Sensitivity

Argonaute 4 (D10F10) Rabbit mAb recognizes endogenous levels of total Argonaute 4 protein. Experiments utilizing overexpression constructs indicated that this antibody may cross-react with Argonaute 1.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human Argonaute 4 protein.

### Background

Small non-coding RNAs are important regulators of gene expression in higher eukaryotes (1,2). Several classes of small RNAs, including short interfering RNAs (siRNAs) (3), microRNAs (miRNAs) (4), and Piwi-interacting RNAs (piRNAs) (5), have been identified. miRNAs are about 21 nucleotides in length and have been implicated in many cellular processes, such as development, differentiation, and stress response (1,2). miRNAs regulate gene expression by modulating mRNA translation or stability (2). miRNAs function together with the protein components in the complexes called micro-ribonucleoproteins (miRNPs) (2). Among the most important components in these complexes are Argonaute proteins (1,2). There are four members in the mammalian Argonaute family, and only Argonaute 2 (Ago2) possesses the Slicer endonuclease activity (1,2). Argonaute proteins participate in the various steps of miRNA-mediated gene silencing, such as repression of translation and mRNA turnover (1).

### Background References

- Peters, L. and Meister, G. (2007) *Mol Cell* 26, 611-23.
- Filipowicz, W. et al. (2008) *Nat Rev Genet* 9, 102-14.
- Caplen, N.J. et al. (2001) *Proc Natl Acad Sci USA* 98, 9742-7.
- Mourelatos, Z. et al. (2002) *Genes Dev* 16, 720-8.
- Girard, A. et al. (2006) *Nature* 442, 199-202.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting **IP:** Immunoprecipitation

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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