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PRODUCT DATASHEET

Anti-Argonaute 2 (Ser-387), Phosphospecific Antibody

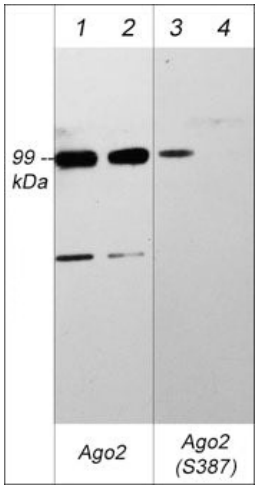
phosphosolutions ANTIBODIES THAT WORK

Product Details

Available Variants	100 µL (SKU:AP5291)
Conjugate	Unconjugated
Isotype	IgG
Gene Name	AGO2
Host Species	Rabbit
Format	Antigen Affinity Purified
Physical State	Liquid
Buffer	PBS + 1 mg/ml BSA, 0.05% NaN3 and 50% glycerol
Applications	ELISA, ICC, WB
Dilution Ranges	WB: 1:1000 ICC: 1:100
Species Reactivity	Chicken, Frog, Human, Mouse, Rat
Immunogen	Phospho-Ago2 (Ser-387) synthetic peptide (coupled to KLH) corresponding to amino acid residues surrounding serine 387 in human Ago2. This peptide sequence is highly conserved in mouse, rat, chick, and fish Ago2. The site is also conserved in Ago1 and Ago4, but the homology surrounding the site is low between Ago2 and these two family members.
Specificity	This antibody was cross-absorbed to unphospho-Ago2 (Ser-387), before affinity purification using phospho-Ago2 (Ser-387) peptide (without carrier). The antibody detects a 97 kDa* protein corresponding to the apparent molecular mass of phosphorylated Ago2 on SDS-PAGE immunoblots of human A431 cells treated with Calyculin A and mouse recombinant Ago2 full length protein. This reactivity is not observed after lambda phosphatase dephosphorylation.
Molecular Weight	97
Quality Control	Western blots performed on each lot.

Storage	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.
UniProt ID	Q9UKV8 UniProt Summary: Required for RNA-mediated gene silencing (RNAi) by the RNA-induced silencing complex (RISC). The 'minimal RISC' appears to include AGO2 bound to a short guide RNA such as a microRNA (miRNA) or short interfering RNA (siRNA). These guide RNAs direct RISC to complementary mRNAs that are targets for RISC-mediated gene silencing. The precise mechanism of gene silencing depends on the degree of complementarity between the miRNA or siRNA and its target. Binding of RISC to a perfectly complementary mRNA generally results in silencing due to endonucleolytic cleavage of the mRNA specifically by AGO2. Binding of RISC to a partially complementary mRNA results in silencing through inhibition of translation, and this is independent of endonuclease activity. May inhibit translation initiation by binding to the 7-methylguanosine cap, thereby preventing the recruitment of the translation initiation factor eIF4-E. May also inhibit translation initiation via interaction with EIF6, which itself binds to the 60S ribosomal subunit and prevents its association with the 40S ribosomal subunit. The inhibition of translational initiation leads to the accumulation of the affected mRNA in cytoplasmic processing bodies (P-bodies), where mRNA degradation may subsequently occur. In some cases RISC-mediated translational repression is also observed for miRNAs that perfectly match the 3' untranslated region (3'-UTR). Can also up-regulate the translation of specific mRNAs under certain growth conditions. Binds to the AU element of the 3'-UTR of the TNF mRNA and up-regulates translation under conditions of serum starvation. Also required for transcriptional gene silencing (TGS), in which short RNAs known as antigene RNAs or agRNAs direct the transcriptional repression of complementary promoter regions.
Country of Origin	United States
Shipping	Blue Ice
Expiration	After date of receipt, stable for at least 1 year at -20°C.
Usage Statement	For research use only. Not intended for therapeutic or diagnostic use. Use of all products is subject to our terms and conditions, which can be viewed on our website.
Post Translational Modification Type	Phosphorylated
Post Translational Modification Residue	Ser-387
NCBI Gene ID	27161

Product Images



Western blot analysis of mouse recombinant Ago2 full length protein (lanes 1-4). The blot was treated with lambda phosphatase (lanes 2 & 4) then probed with rabbit polyclonal anti-Ago2 (AP5281) (lanes 1 & 2) and rabbit polyclonal anti-Ago2 (Ser-387) phospho-specific antibody (lanes 3 & 4).