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PRODUCT DATASHEET

# Anti-Argonaute 2 (Tyr-393), Phosphospecific Antibody

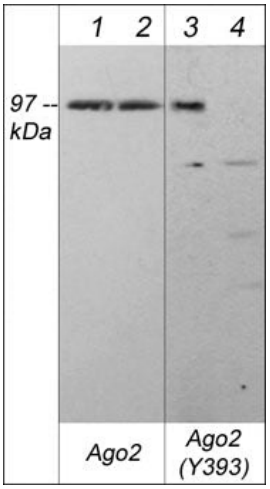
phosphosolutions ANTIBODIES THAT WORK

## Product Details

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|---|---|
| **Available Variants** | 100 µL (SKU:AP5311) |
| **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<br>ICC: 1:50 |
| **Species Reactivity** | Chicken, Frog, Human, Mouse, Rat |
| **Immunogen** | Phospho-Ago2 (Tyr-393) synthetic peptide (coupled to KLH) corresponding to amino acid residues surrounding tyrosine 393 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 not in Ago3. |
| **Specificity** | This antibody was cross-absorbed to unphospho-Ago2 (Tyr-393), before affinity purification using phospho-Ago2 (Tyr-393) peptide. The antibody detects a 97 kDa* protein corresponding to the apparent molecular mass of phosphorylated Ago2 on SDS-PAGE immunoblots of human A431 cells that were treated with EGF. This reactivity is not observed after lambda phosphatase dephosphorylation. |
| **Molecular Weight** | 97 |
| **Quality Control** | Western blots performed on each lot. |

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| **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<br>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** | Tyr-393 |
| **NCBI Gene ID** | 27161 |

## Product 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).