product AS09 527
AGO1 | Argonaute 1

**Product information**

**Background**
AGO1 belongs to a group of argonaute proteins which are catalytic component of the RNA-incudes silencing complex (RISC). This protein complex is responsible for the gene silencing (RNAi).

**Immunogen**
N-terminal peptide of *Arabidopsis thaliana* AGO1 O04379, At1g48410

**Host**
Rabbit

**Clonality**
Polyclonal

**Purity**
Affinity purified serum in PBS pH 7.4.

**Format**
Lyophilized

**Quantity**
50 µg

**Reconstitution**
For reconstitution add 50 µl of sterile water.

**Storage**
Store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles. Please, remember to spin tubes briefly prior to opening them to avoid any losses that might occur from lyophilized material adhering to the cap or sides of the tubes.

**Tested applications**
Chromatin Immunoprecipitation (ChIP), Immunolocalization (IL), small-RNA-IP-Seq, Western blot (WB)

**Related products**
AS09 527-ALP | Anti-AGO1 | Argonaute 1 (40 µg, ALP-conjugated)
AS09 527B | Anti-AGO1 | Argonaute 1 (40 µg, Biotin conjugated)
AS09 527-HRP | Anti-AGO1 | Argonaute 1 (40 µg, HRP-conjugated)
AS14 2776 | Anti-AGO1 | Argonaute 1 (*Chlamydomonas*), rabbit antibody
AS09 527P | AGO1 | Argonaute 1 | Blocking peptide
AS13 3862 | Anti-AGO2 | Argonaute 2, rabbit antibody
AS09 617 | Anti-AGO4 | Argonaute 4, rabbit antibody
AS10 671 | Anti-AGO5 | Argonaute 5, rabbit antibody
AS10 672 | Anti-AGO6 | Argonaute 6, rabbit antibody
AS10 673 | Anti-AGO9 | Argonaute 9, rabbit antibody
AS15 3071 | Anti-AGO10 | Argonaute 10, rabbit antibody
Collection of antibodies to micro RNA
Plant protein extraction buffer
Secondary antibodies

**Additional information**
Antibody binds microRNA and tasiRNAs, preference for 21nt miRNAs with 5'U.

To detect AGO1 in *Nicotiana benthamiana*, please inquire.

**Application information**

**Recommended dilution**
2 µg (ChIP), 1: 200 (IL), small-RNA-IP-Seq, 1 : 5000-1 : 10 000 (WB)

**Expected | apparent MW**
116.4 | 130 kDa

**Confirmed reactivity**
*Arabidopsis thaliana, Nicotiana benthamiana*

**Predicted reactivity**
*Brassica pekinensis, Capsella rubella, Malus domestica, Pisum sativum, Ricinus communis, Solanum tuberosum, Zea mays, Vitis vinifera*

**Not reactive in**
*Chlamydomonas reinhardtii, Triticum aestivum*

**Additional information**
AGO expression may be tissue specific and using floral tissue is recommended where most of the AGOs are expressed the highest. Use of proteasome inhibitors as MG132 can help to stabilize AGO proteins during extraction procedure.
The AGO1 antibody is extremely specific to AGO1 and does not cross-react with other antibodies. The evidence is 1) the peptide to which it was raised is at the very N-terminus of the protein and is not present in other AGOs 2) AGO1 does not cross react with the AGOs which are overexpressed (AGO2, AGO3, AGO4, AGO5, AGO6, AGO9) using a western blot.

TCA acetone precipitation method

**Selected references**


**Application example**

80 µg of *Arabidopsis thaliana* soluble total cell extract (extracted in 20 mMTris pH 7.5, 5mM MgCl2, 2.5mM DTT, 300 mM NaCl, 0.1% NP-40, 1% protease inhibitor MG132) was separated on 6% SDS-PAGE and blotted 1h to nitrocellulose. Filters were blocked 1h with 5% low-fat milk powder in TBS-TT (0.25% TWEEN20; 0.1% Triton-X) and probed with anti-AGO1 antibody (1:10 000, 1h) and secondary anti-rabbit (1:10000, 1 h) antibody (HRP conjugated, Santa Cruz(sc-2054)) in TBS-TT containing 5% low fat milk powder. Antibody incubations were followed by washings in TBS-TT. All steps were performed at RT with agitation. Blots were developed for 5 min with ECL-PLUS detection reagent according the manufacturer's instructions (GE Healthcare). Exposure time was 5 seconds.

Roche protease inhibitor cocktail (no EDTA) can also be applied in extraction buffer.

Courtesy Dr. Ericka Havecker, University of Cambridge, UK