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  KLH-conjugated, 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), rabbit antibodies
AS09 527B | Anti-AGO1 | Argonaute 1 (40 µg, Biotin conjugated), rabbit antibodies
AS09 527H | Anti-AGO1 | Argonaute 1 (40 µg, HRP-conjugated), rabbit antibodies
AS14 2776 | Anti-AGO1 | Argonaute 1 (Chlamydomonas), rabbit antibodies
AS09 527P | AGO1 | Argonaute 1 | Blocking peptide
AS13 368Z | Anti-AGO2 | Aargonute 2, rabbit antibodies
AS09 617 | Anti-AGO4 | Argonaute 4, rabbit antibodies
AS10 671 | Anti-AGO5 | Argonaute 5, rabbit antibodies
AS10 672 | Anti-AGO6 | Argonaute 6, rabbit antibodies
AS10 673 | Anti-AGO9 | Argonaute 9, rabbit antibodies
AS15 3071 | Anti-AGO10 | Argonaute 10, rabbit antibodies
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.

Recommended for detection of AGO1: extreme low femtogram range chemiluminescent detection reagent

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, Glycine max, Malus domestica, Pism sativum, Ricinus communis, Solanum tuberosum, Zea mays, Vitis vinifera

Not reactive in  Chlamydomonas reinhardtii, Triticum aestivum, Zea mays

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

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) aAGO1 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% proteasome 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) 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. 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