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Product no **AS08 325**

ARF1 | ADP-ribosylation factor 1

Product information

Immunogen	Recombinant GST fusion of full length of <i>Arabidopsis thaliana</i> ARF1 (P36397 , AT2G47170)
Host	Rabbit
Clonality	Polyclonal
Purity	Serum
Format	Lyophilized
Quantity	50 µl
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.
Additional information	Cellular [compartment marker] of Golgi in immunolocalization and COP1 in western blot

Application information

Recommended dilution	1 : 1000 (IF), 1 : 100 (IG), 1 : 1000 (WB)
Expected apparent MW	21 kDa (<i>Arabidopsis thaliana</i>)
Confirmed reactivity	<i>Arabidopsis thaliana</i> , <i>Chlamydomonas reinhardtii</i> , <i>Elaeis sp.</i> , <i>Lilium longiflorum</i> , <i>Medicago truncatula</i> , <i>Nicotiana tabacum</i> , <i>Oryza sativa</i> , <i>Petunia hybrida</i> cv Mitchell, <i>Physcomitrella patens</i> , <i>Solanum tuberosum</i>
Predicted reactivity	<i>Brassica juncea</i> , <i>Brassica napus</i> , <i>Capsella rubella</i> , <i>Capsicum annum</i> , <i>Cucumis sp.</i> , <i>Daucus carota</i> , <i>Elaeis guineensis</i> , <i>Glycine max</i> , <i>Helleborus orientalis</i> , <i>Hordeum vulgare</i> , <i>Medicago truncatula</i> , <i>Nannochloropsis gaditana</i> , <i>Nicotiana benthamina</i> , <i>Ostreococcus tauri</i> , <i>Populus trichocarpa</i> , <i>Zea mays</i> Species of your interest not listed? Contact us
Not reactive in	<i>Microsporidia</i> sp.
Additional information	References describing immunolocalization (IF) and (IG) studies: Pimpl et al (2000). In Situ Localization and in Vitro Induction of Plant COPI-Coated Vesicles. <i>Plant Cell</i> . 2000 Nov;12(11):2219-36. Ritzenthaler et al. (2002). Reevaluation of the Effects of Brefeldin A on Plant Cells Using Tobacco Bright Yellow 2 Cells Expressing Golgi-Targeted Green Fluorescent Protein and COPI Antisera. <i>Plant Cell</i> . 2002 Jan;14(1):237-61. For high resolution images, please visit the specific product page at www.agrisera.com
Selected references	Hurny et al. (2020). SYNERGISTIC ON AUXIN AND CYTOKININ 1 Positively Regulates Growth and Attenuates Soil Pathogen Resistance. <i>Nat Commun</i> . 2020 May 1;11(1):2170. doi: 10.1038/s41467-020-15895-5. (immunolocalization) Kuang et al. (2019). Quantitative Proteome Analysis Reveals Changes in the Protein Landscape During Grape Berry Development With a Focus on Vacuolar Transport Proteins. <i>Front Plant Sci</i> . 2019 May 15;10:641. doi: 10.3389/fpls.2019.00641. eCollection 2019. Singh et al. (2018). A single class of ARF GTPase activated by several pathway-specific ARF-GEFs regulates essential membrane traffic in <i>Arabidopsis</i> . <i>PLoS Genet</i> . 2018 Nov 15;14(11):e1007795. doi: 10.1371/journal.pgen.1007795. Gonzaga Heredia-Martinez et al. (2018). Chloroplast damage induced by the inhibition of fatty acid synthesis triggers autophagy in <i>Chlamydomonas</i> . <i>Plant Physiol</i> , Sept. 2018. Lynch et al. (2017). Multifaceted plant responses to circumvent Phe hyperaccumulation by downregulation of flux through the shikimate pathway and by vacuolar Phe sequestration. <i>Plant J</i> . 2017 Dec;92(5):939-950. doi:

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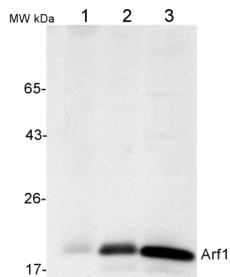
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[Yüzbaşıoğlu et al. \(2016\)](#). Functional specialization of Arf paralogs in nodules of model legume, *Medicago truncatula*. *Plant Growth Regul.* DOI: 10.1007/s10725-016-0227-2.

[Marais et al. \(2015\)](#). The Qb-SNARE Memb11 interacts specifically with Arf1 in the Golgi apparatus of *Arabidopsis thaliana*. *J Exp Bot.* 2015 Jul 24. pii: erv373.

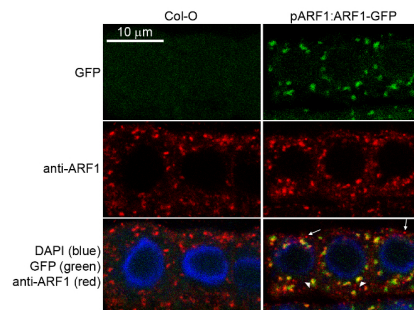
[Wang et al. \(2015\)](#). UDP-D-galactose synthesis by UDP-glucose 4-epimerase 4 is required for organization of the trans-Golgi network/early endosome in *Arabidopsis thaliana* root epidermal cells. *J. Plant Res.* 2015 May 27. (immunogold application)

Application example



50 µg of total protein from (1) *Nicotiana tabacum* protoplast total protein, (2) *Arabidopsis thaliana* protoplast soluble protein, (3) *Arabidopsis thaliana* protoplast total protein were separated on **10 % SDS-PAGE** and blotted 2h to **nitrocellulose** (Semi-dry, 200mA). Filters were blocked over night with 5% low-fat **milk powder** in TBS and probed with anti-Sec21p antibodies (AS08 327, **1:1000**, 1h) and secondary anti-rabbit (**1:20000**, 1 h) antibody (HRP) in TBS-Tween (recommended secondary antibody [AS09 602](#)). Signal was detected with chemiluminescence detection reagent and exposure time for this image was 1 minute.

Protoplasts were extracted in 50mM Tris, 10 mM EDTA and Triton X100, 0.02%.



Immunofluorescence

Specificity testing of rabbit anti-ARF1 serum. Immunofluorescence labelling of rabbit anti-ARF1 antibody (red) in 5-day-old root epidermal cells of the *Arabidopsis thaliana* ecotype Columbia-0 (WT) or seedlings expressing the ADP-RIBOSYLATION FACTOR 1 (AtARFA1c; accession At2g47170) fused to EGFP (green) (Xu, J. and Scheres, B. 2005. *Plant Cell* 17, 525-536). The rabbit anti-ARF1 antibody was diluted 1:1000 and the secondary antibody, donkey anti-rabbit CY5-coupled (Jackson ImmunoResearch) was diluted 1:300. The nuclei were stained with DAPI (blue). Note the co-labelling of ARF1-GFP with the anti-ARF1 antibody (arrowheads) and the additional labelling (potentially of other ARF1 variants) by the anti-ARF1 antibody (arrows). The antibody staining permeability was limited to the 1-2 outermost layers of the whole-mounted root tips.

Courtesy of Dr. Anna Gustavsson and Dr. Markus Grebe