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Product no AS08 327

Sec21p | Gamma subunit, COP vesicles

Product information

Immunogen	GST fusion of a part of recombinant Sec21 of *Arabidopsis thaliana* Q0WW26, At4g34450
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 the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.
Additional information	This product can be sold containing proclin if requested

Application information

Recommended dilution	1 : 1000 (IF), 1 : 1000 (WB)
Expected | apparent MW	98 kDa
Confirmed reactivity	*Arabidopsis thaliana, Phaeodactylum tricornutum, Zea mays*
Predicted reactivity	*Brachypodium distachyon, Brassica napus, Brassica rapa subsp. pekinensis, Capsella rubella, Citrus clementina, Coffea canephora, Eutrema salsugineum, Glycine max, Glycine soja, Hordeum vulgare var. distichum, Medicago truncatula, Oryza sativa*, *Populus trichocarpa*, *Prunus persica, Ricinus communis, Solanum lycopersicum, Solanum tuberosum, Sorghum bicolor, Theobroma cacao*, *Triticum aestivum*, *Vitis vinifera, Zea mays*, Species of your interest not listed? Contact us
Not reactive in	*Nicotiana tabacum, Microsporidia* sp.
Additional information	This antibody can be used as a Golgi marker in immunolocalization and as a marker of COP1 in Western blot. **References describing immunolocalization (IF) and (IG) studies:** Pimpl et al (2000). In Situ Localization and in Vitro Induction of Plant COPI-Coated Vesicles. Plant Cell. 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. Plant Cell. 2002 Jan;14(1):237-61.
Selected references	Hurny et al. (2020). SYNERGISTIC ON AUXIN AND CYTOKININ 1 Positively Regulates Growth and Attenuates Soil Pathogen Resistance. Nat Commun. 2020 May 1;11(1):2170. doi: 10.1038/s41467-020-15895-5. (immunolocalization) Lupette et al. (2019). The architecture of lipid droplets in the diatom Phaeodactylum tricornutum. Algal Research Volume 38, March 2019, 101415. Singh et al. (2018). A single class of ARF GTPase activated by several pathway-specific ARF-GEFs regulates essential membrane traffic in Arabidopsis. PLoS Genet. 2018 Nov 15;14(11):e1007795. doi: 10.1371/journal.pgen.1007795. Kitakura et al. (2017). BEN3/BIG2 ARF GEF is Involved in Brefeldin A-Sensitive Trafficking at the trans-Golgi Network/Early Endosome in Arabidopsis thaliana. Plant Cell Physiol. 2017 Oct 1;58(10):1801-1811. doi: 10.1093/pcp/pcx118. Nagel et al. (2017). Arabidopsis SH3P2 is an ubiquitin-binding protein that functions together with ESCRT-I and the deubiquitylating enzyme AMSH3. Proc Natl Acad Sci U S A. 2017 Aug 7. pii: 201710866. doi: 10.1073/pnas.1710866114. Wang et al. (2016). Comprehensive proteomic analysis of developing protein bodies in maize (Zea mays) endosperm provides novel insights into its biogenesis. J Exp Bot. 2016 Dec;67(22):6323-6335. Epub 2016 Oct 27. Wattelet-Boyer et al. (2016). Enrichment of hydroxylated C24- and C26-acyl- chain sphingolipids mediates PIN2 apical sorting at trans-Golgi network subdomains. Nat Commun. 2016 Sep 29;7:12788. doi: 10.1038/ncomms12788. Derbyshire et al. (2015). Proteomic Analysis of Microtubule Interacting Proteins over the Course of Xylem Tracheary Element Formation in Arabidopsis. Plant Cell. 2015 Oct 2. pii: tpc.15.00314. Tanaka et al. (2013). Cell Polarity and Patterning by PIN Trafficking through Early Endosomal Compartments in Arabidopsis thaliana. PLoS Genet. May;9(5). (immunolocalization).

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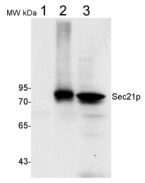
Hopff et al. (2013). The plasma membrane proteome of maize roots grown under low and high iron conditions. J Proteomics Jan 24.
Pimpl et al (2000). In situ localization and in vitro induction of plant COPI-coated vesicles. Plant Cell. 2000 Nov;12(11):2219-36.

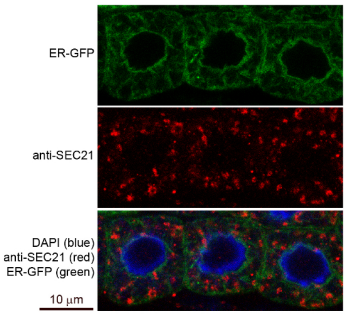
Application example



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. Signal was detected with chemiluminescent detection reagent, exposure time was 1 minute.

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

Immunofluorescence



Immunofluorescence labelling of rabbit anti-SEC21 (gamma subunit of COP vesicles; red) in 5-day-old root epidermal cells of *Arabidopsis thaliana* expressing ER-mGFP5-HDEL (ER marker; green). The 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).

Courtesy of Dr. Anna Gustavsson and Dr. Markus Grebe, Umeå Plant Science Centre, Sweden