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Product no AS08 304

AtpA | Alpha subunit of ATP synthase, chloroplastic

Product information

Background	**ATP synthase** is the universal enzyme that synthesizes ATP from ADP and phosphate using the energy stored in a transmembrane ion gradient. **AtpA** is the largest subunit of the membrane-extrinsic ATP synthase subcomplex.
Immunogen	Recombinant maize chloroplast AtpA P05022
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.
Tested applications	Immunogold (IG), Immunoprecipitation (IP), Western blot (WB)
Related products	AS03 030 | Anti-ATP synthase subunit beta, hen antibodies AS08 312 | Anti-ATP synthase subunit gamma, rabbit antibodies AS05 071 | Anti-ATP synthase subunit c, rabbit antibodies AS08 370 | Anti-ATP synthase whole enzyme, rabbit antibodies
Additional information	Sequence of the protein used for eliciting this antibody is also conserved in *Arabidopsis thaliana* AtpA P56757

Application information

Recommended dilution	1: 200 (IG), 1 : 5 000 (WB)
Expected | apparent MW	55 kDa
Confirmed reactivity	*Arabidopsis thaliana, Begonia* sp., *Capsicum annuum, Heliobacterium modesticaldum, Zea mays*
Predicted reactivity	Dicots and (including Lilium superbum) chloroplast AtpA; may cross-react with mitochondrial AtpA; Algae, *Nannochloropsis gaditana*, Cyanobacteria Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known.
Selected references	Pao et al. (2018). Lamelloplasts and minichloroplasts in Begoniaceae: iridescence and photosynthetic functioning. J Plant Res. 2018 Mar 2. doi: 10.1007/s10265-018-1020-2. (ImmunoGold) Zhang et al. (2017). Nitric oxide induces monosaccharide accumulation through enzyme S-nitrosylation. Plant Cell Environ. 2017 Sep;40(9):1834-1848. doi: 10.1111/pce.12989. Jeon et al. (2017). Functional characterization of chloroplast-targeted RbgA GTPase in higher plants. Plant Mol Biol. 2017 Nov;95(4-5):463-479. doi: 10.1007/s11103-017-0664-y. Murcha et al. (2016). Plant specific Preprotein and Amino Acid Transporter proteins are required for tRNA import into mitochondria. Plant Physiol. 2016 Oct 27. pii: pp.01519.2016. Camejo et al. (2015). Proteomic identification of mitochondrial carbonylated proteins in two maturation stages of pepper fruits. Proteomics. 2015 Aug;15(15):2634-42. doi: 10.1002/pmic.201400370. Yang et al. (2015). Purification and biochemical characterization of the ATP synthase from Heliobacterium modesticaldum. Protein Expr Purif. 2015 May 12. pii: S1046-5928(15)00111-4. doi: 10.1016/j.pep.2015.05.006.

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For high resolution images, please visit the specific product page at www.agrisera.com

Application example

Western blot

Lane 1: *Arabidopsis thaliana* total leaf protein extract;
Lane 2: *Zea mays* total leaf protein extract
5 µg of total protein were loaded per each lane.

Experimental conditions:

Proteins were separated in a 12% or 5-15% gradient gel following by a transfer to nitrocellulose membrane. Membrane was blocked with TBST + 4% non-fat dried milk, 20 min following by three washes in TBST. Incubation time with primary and secondary antibodies was 1 hr primary, 30 min for secondary antibodies followed by reaction development using chemiluminescence.