

Agrisera

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Product no **AS07 213**

V-ATPase | Epsilon subunit of tonoplast H⁺ATPase

Product information

Background	Plant vacuole V-ATPase is responsible for energization of transport of ions and metabolites, and acts as well 'house-keeping' and as a stress response enzyme. V-ATPase is a multi-subunit enzyme composed of a membrane sector and a cytosolic catalytic sector. It is related to the FoF1 ATP synthase. Alternative protein names: Vacuolar proton pump subunit E, Protein EMBRYO DEFECTIVE 2448
Immunogen	<u>KLH</u> -conjugated synthetic peptide chosen from subunit E of plant V-ATPase including <i>Arabidopsis thaliana</i> UniProt: <u>Q39258-1</u> , TAIR: <u>At4g11150</u> . Peptide is conserved in vacuolar H ⁺ -ATPase subunit E, isoform 1 to 3 (VHA-E1).
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	Immunofluorescence (IF), Immunohistochemistry (IHC), Western blot (WB)
Related products	AS09 577 Anti-V-ATPase Epsilon subunit of tonoplast H ⁺ ATPase, goat antibodies AS07 213P V-ATPase Epsilon subunit of tonoplast H ⁺ ATPase Blocking peptide other antibodies to vacuolar membrane marker antibodies for plant cellular compartments recommended secondary antibody
Additional information	Cellular [compartment marker] of tonoplast membrane. This product can be sold containing ProClin if required.

Application information

Recommended dilution	1 : 100 (IF), 1 : 50 (IHC), 1 : 2000-1 : 5000 (WB)
Expected apparent MW	26 31 kDa (<i>Arabidopsis thaliana</i>)
Confirmed reactivity	<i>Ananas comosus</i> , <i>Arabidopsis thaliana</i> , <i>Cucumis sativus</i> , <i>Chara australis</i> , <i>Chlamydomonas reinhardtii</i> , <i>Fortunella margarita</i> Swingle, <i>Hordeum vulgare</i> , <i>Lycopersicon esculentum</i> , <i>Lilium longiflorum</i> , <i>Malus x domestica</i> Borkh. c.v. Fuji, <i>Medicago truncatula</i> , <i>Mesembryanthemum crystallinum</i> , <i>Nicotiana tabacum</i> , <i>Noccaea caerulea</i> , <i>Oryza sativa</i> , <i>Petunia hybrida</i> cv. Mitchell, <i>Populus</i> sp., <i>Pteris vittata</i> (fern), <i>Thellungiella</i> sp., <i>Triticum aestivum</i> , <i>Zea mays</i> , <i>Vitis vinifera</i>
Predicted reactivity	<i>Brachypodium dystachyon</i> , <i>Capsella rubella</i> , <i>Citrus clementina</i> , <i>Citrus unshiu</i> , <i>Citrus limon</i> , <i>Eucalyptus grandis</i> , <i>Glycine max</i> , <i>Glycine soja</i> , <i>Lotus japonicus</i> , <i>Phaseolus</i> sp., <i>Physcomitrella patens</i> , <i>Populus trichocarpa</i> , <i>Prunus persica</i> , <i>Ricinus communis</i> , <i>Riticum aestivum</i> , <i>Solanum lycopersicum</i> , <i>Solanum tuberosum</i> , <i>Sorghum bicolor</i> , <i>Theobroma cacao</i> , <i>Vitis vinifera</i> , Bull frog, Chicken, Bovine, <i>Drosophila melanogaster</i> , Human, Mouse, Rat
	Species of your interest not listed? Contact us

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Not reactive in | *Avicennia* sp., mangrove plants, *Schizosaccharomyces pombe*

Additional information | V-ATPase is very sensitive for the redox of the SDS buffer. We recommend using at least 50-100 mM DTT freshly prepared before handling the sample.

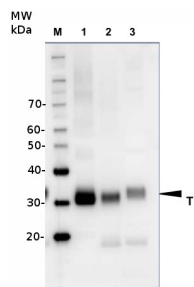
Immunostaining protocol using V-ATPase antibodies can be found [here](#).

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

Selected references | [Collins](#) et al. (2020). EPSIN1 Modulates the Plasma Membrane Abundance of FLAGELLIN SENSING2 for Effective Immune Responses . *Plant Physiol.* 2020 Feb 24. pii: pp.01172.2019. doi: 10.1104/pp.19.01172

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Application example



10 µg of total protein from samples such as *Arabidopsis thaliana* leaf (1) , *Hordeum vulgare* leaf (2) , *Zea mays* leaf (3) were extracted with Protein Extraction Buffer PEB ([AS08_300](#)). Samples were diluted with 1X sample buffer (NuPAGE LDS sample buffer (Invitrogen) supplemented with 50 mM DTT and heat at 70°C for 5 min and kept on ice before loading. Protein samples were separated on 4-12% Bolt Plus gels, LDS-PAGE and blotted for 70 minutes to PVDF using tank transfer. Blots were blocked immediately following transfer in 2% blocking reagent or 5% non-fat milk dissolved in 20 mM Tris, 137 mM sodium chloride pH 7.6 with 0.1% (v/v) Tween-20 (TBS-T) for 1h at room temperature with agitation. Blots were incubated in the primary antibody at a dilution of 1: 5 000 (in blocking reagent) for 1h at room temperature with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, and then washed 1x15 min and 3x5 min with TBS-T at room temperature with agitation. Blots were incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, recommended secondary antibody [AS09_602](#), Agrisera) diluted to 1:25 000 in blocking reagent for 1h at room temperature with agitation. The blots were washed as above. The blot was developed for 5 min with chemiluminescent detection reagent, according the manufacturers instructions. Images of the blots were obtained using a CCD imager (VersaDoc MP 4000) and Quantity One software (Bio-Rad). Exposure time was 30 seconds.