

product **AS09 502**

V-ATPase, A | vacuolar H⁺-ATPase subunit A

product information

background	V-ATPase subunit A is a catalytic subunit of V1 complex of vacuolar ATPase. This enzyme (EC=3.6.3.14) is involved in acidification process of various compartments of eucaryotic cell. This protein is coded by VHA-A gene. Alternative names: Vacuolar proton pump subunit alpha, vacuolar H(+)-ATPase subunit A, V-ATPase 69 kDa subunit
immunogen	purified native V-ATPase subunit A from <i>Ricinus communis</i>
antibody format	rabbit polyclonal, serum,
quantity	100 µl
storage	store at -20°C; 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 material adhering to the cap or sides of the tubes.
tested applications	ELISA (ELISA), western blot (WB)
additional information	0.1 % sodium azide is added as preservative. For antibody re-suspending information check the tube label. Antibodies will detect target protein in a few µg of a crude preparation loaded per well. If purified preparations of vacuolar and plasma membranes are used, one µg load per well should be sufficient. Protocol for isolation of vacuolar membranes can be found here .

application information

recommended dilution	1: 8000 (ELISA), 1: 2000 with standard ECL (WB)
expected apparent MW	63 68 kDa (<i>Ricinus communis</i>)
confirmed reactivity	<i>Acetabularia sp.</i> , <i>Hordeum vulgare</i> , <i>Oryza sativa</i> , <i>Pinus sylvestris</i> , <i>Pyrus sp.</i> , <i>Ricinus communis</i>
predicted reactivity	dicots including: <i>Arabidopsis thaliana</i> , <i>Cucumis sativus</i> , <i>Gossypium mexicanum</i> , <i>Vitis vinifera</i> , monocots including: <i>Hordeum vulgare</i> , trees: <i>Populus trichocarpa</i>
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	Protein or membrane sample should be treated at 70°C for 10 min before loading on the gel.

Diluted antibody solution can be used 2 to 3 times within one month if it contains 0.1 % sodium azide as preservative and is stored at -20°C to -80°C.

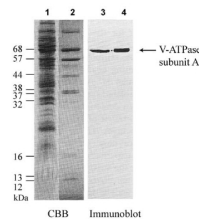
Manufactured by Operon Biotechnologies.

selected references

[Kawamura](#) et al. (2000). Tissue specificity of E subunit isoforms of plant vacuolar H(+)-ATPase and existence of isotype enzymes. *J.Biol. Chem.* 275:6515-6522.
[Nakanishi](#) & Maeshima (1998). Molecular cloning of vacuolar H(+)-pyrophosphatase and its developmental expression in growing hypocotyl of mung bean. *Plant Physiol.* 116:589-597. [Smart](#) et al. (1998). Genes involved in osmoregulation during turgor-driven cell expansion of developing cotton fibers are differentially regulated. *Plant Physiol.* 116:1539-1549. [Matsuura-Eno](#) et al. (1992). Mechanism of the Decline in Vacuolar H⁺-ATPase Activity in Mung Bean Hypocotyls during Chilling. *Plant Physiology* 100:718-722.

application example

65 µg/lane of purified vacuolar membranes from *Vigna radiata L.* (1,3) and purified V-ATPase, 7.4 µg/lane (2,4) were separated on 12 % **SDS-PAGE** and blotted 1h to PVDF membrane (40 min. at 10 V using BioRad semidry transfer). Filters were blocked 1h with 5 % low-fat **milk powder** in TBS-T (0.05% Triton X.100). Membranes were washed 5 times with TBS-T, each time in a fresh polystyrene box and probed with anti-V-ATPase subunit A antibodies (AS09 502, **1:2000**, 1h) and secondary anti-rabbit (**1:2000**, 1 h). All steps were performed in RT with agitation.



CBB - staining with Coomassie blue - left panel.
Immunoblot - western blot detectoin - right panel.