



**POLYCLONAL ANTIBODY**

*For research use only. Not for clinical diagnosis.*

**Catalog No. COP-080002**

**vacuolar H<sup>+</sup>-ATPase, subunit a**  
**(V-ATPase subunit a (100 kD subunit))**

<b>Product type</b>	Primary antibodies
<b>Host</b>	Rabbit
<b>Source</b>	Serum
<b>Form</b>	Liquid 0.1% NaN <sub>3</sub> as a preservative.
<b>Volume</b>	100 µl
<b>Concentration</b>	
<b>Specificity</b>	
<b>Antigen</b>	synthetic peptide: amino acids 117-135
<b>Isotype</b>	IgG

**Application notes** ELISA, WB

**Recommended use**

**Recommended dilutions**

ELISA: 1/8,000

Western blotting\*: 1/2,000 Predicted molecular weight: 100 kDa

**\*General information:** Each antibody was raised in rabbits against the corresponding synthetic peptide or the purified enzyme. Therefore, Protein A or anti-(rabbit IgG) antibodies can be used as the second antibodies for immunoblotting.

**Sample treatment:** Please do not boil the protein or membrane samples for immunoblotting. We recommend the treatment at 70°C for 10 min.

**Sample amount:** For the major component of membranes, such as vacuolar and plasma membrane aquaporins (TIPs and PIPs) and H<sup>+</sup>-pyrophosphatase, a small amount of the crude membrane fraction (a few micrograms) is enough to detect the antigen protein. When you use the purified preparation of vacuolar and plasma membranes, the antibodies can detect the antigen protein in one microgram membrane preparation.

**Antibody dilution:** Please dilute the antibody solution to 1:2000 or more with TBS (Tris-buffered saline) or PBS (phosphate-buffered saline), if you use the ECL detection system. For example, 5 µL of the original antibody solution can be diluted with 10 mL of TBS. The diluted antibody solutions can be used twice or three times within a month. In this case, please add sodium azide into the antibody solution at 0.05% before the first experiment and store at 20°C or 80°C.



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**Second antibodies:** We recommend HRP-linkd Protein A and HRP-linked anti-(rabbit IgG) antibodies. Please dilute the second antibody to 1:3000 with TBS or PBS.

**Antigen detection:** We recommend the ECL detection system for immunoblotting, because its sensitivity is high and you can select the best expose period for detection of the antigen.

Optimal dilutions/concentrations should be determined by the end user.

**Staining Pattern**

**Cross reactivity**

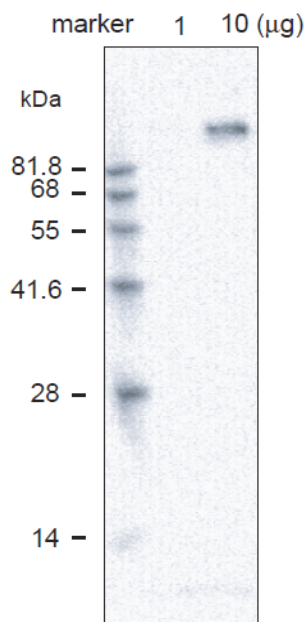
**Storage**

Store below -20°C (below -80°C for prolonged storage).

Aliquot to avoid cycles of freeze/thaw.

**References**

- 1) Yoshihiro K, et al., Zinc Transporter of *Arabidopsis thaliana* AtMTP1 is Localized to Vacuolar Membranes and Implicated in Zinc Homeostasis. *Plant Cell Physiol* 45, 1749-1758 (2004)
- 2) Fumiyoshi I, et al., Novel type aquaporin SIPs are mainly localized to the ER membrane and show cell-specific expression in *Arabidopsis thaliana*. *FEBS Letters* 579, 5814-5820 (2005)



Antibody: anti-(vacuolar H<sup>+</sup>-ATPase subunit a, AtVHA-a)

Protein sample: *A. thaliana*, crude membrane fraction

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Manufactured by Operon Biotechnologies, K.K



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