

Anti VSP (Vegetative Storage Protein 1) antibody, rabbit polyclonal

81-126 100 µg

Shipping/Storage: Ship at 4°C and store at -20°C. Do not freeze below -20°C.

Reactivity: *Arabidopsis thaliana* VSP1 protein. Can react with VSP2 proteins whose sequences are very similar (86% identity). Not tested in other plant species, but likely to react with VSP1 of related species.

Immunogen: *Arabidopsis thaliana* recombination His6-VSP1.

Tested Application:

1. Western blotting (1/1000 to 1/2000).

Purity: IgG fraction purified with protein A.

Foam: 2mg/ml in PBS, 50% glycerol. Filter sterilized.

Background: VSP1 (nutrient storage protein 1) may function as a somatic storage protein during early seedling development. Synthesized as a 270 aa protein, the signal peptide with 17 aa is removed in the mature form. Glycosylation is made at amino acids 115 and 215.

Tissue Specificity: It is expressed in leaves and genitalia, particularly in style, basal and distal ends of the ovarioles, and.

Subcellular Localization: Vacuoles

Expression: The promoter from Vsp 1 expressed its efficacy in pistils, particularly in the mode, at the base and distal end of the ovary, and in silique, whereas the promoter from Vsp 2 showed its activity in vegetative shoots, petioles, petioles and recipient organs of floral organs. These findings suggest that the expression of Vsp 1 and Vsp 2 may be developmentally regulated in *A. thaliana*.

Data link: UniProtKBO49195 (Link) ([Link](#)) (VSP1_ARATH). O82122 (Link) ([Link](#)) (VSP2_ARATH)

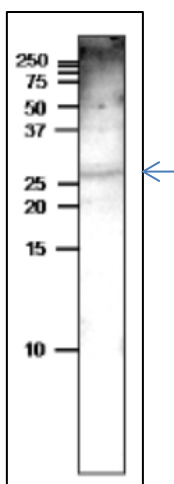
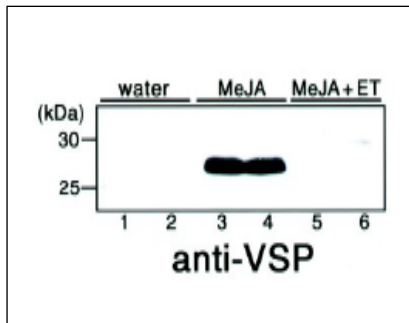


Fig 1 Arabidopsis Western blot of VSP in total extracts.

Crude extracts of mature siliques of *Arabidopsis thaliana* were run on SDS-PAGE (15 %) and blotted to PVDF membranes by wet-system. Was blocked with 3% skimmed milk. Anti VSP Ab was used at 2µg/ml. Secondary antibodies (goat anti-rabbit IgG antibody HRP binding, ab97051) were used at 1/10,000 dilutions. The molecular weight of VSP1 is 28 kDa



Western blot of figure 2 VSP showing induced VSP by MeJA

Derivative extracts of ER in rosette leaves treated with MeJA were subjected to SDS-PAGE and immunoblotted with anti VSP Ab. Lanes 1 and 2, water treatment; lanes 3 and 4, 50 μ M MeJA treatment; lanes 5 and 6, 50 μ M MeJA plus 20 μ l/L ethylene treatment for 36 h.

Usage literature. This antibody is described in reference 1 and is used in the following literature:

1. Matsushima R et al. An endoplasmic reticulum-derived structure that is induced under stress conditions in Arabidopsis. *Plant Physiol.* [\(Link\)](#) 2002 Dec;130(4):1807-14. PMID: 12481064 [\(Link\)](#) WB (Arabidopsis)
2. Yamada K, Nishimura M, Hara-Nishimura I. The slow wound-response of γ VPE is regulated by endogenous salicylic acid in Arabidopsis. *Planta* [\(Link\)](#) 218, 599–605(2004) PMID: 14600834 [\(Link\)](#) WB (Arabidopsis)

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