Anti-NAI2 antibody, ΔSP, rabbit polyclonal

81-103 200 μg

Shipping and Storage: Shipped at 4℃ or -20℃ and store at -20℃. Do not freeze.

Immunogen: Recombinant His6-tagged NAI2 (amino acids 272-502) protein lacking signal peptide (*A. thaliana*).

Form: 2 mg/ml in PBS- with 50% glycerol. Filter-sterilized. No preservative or carrier protein

Purity: IgG fraction purified by protein A affinity-chromatography from the rabbit antiserum

Reactivity: NAI2 protein of Arabidopsis thaliana. Not tested in other species.

Validation of specificity: Specific reactivity has been validated by western blot using *nai1* mutant extracts.

Applications:

1. Western blotting (1/2,000-1/4,000)
2. Immunofluorescence staining (1/1,000-1/3,000)

Background: Responsible for the ER body formation. Regulates the number and shape of the ER bodies and the accumulation of PYK10 in ER bodies, but is not involved in the expression of PYK10. Interacts directly or indirectly with MEB1 and MEB2. Expressed in roots. Detected in shoot apex. Induced by NAI1.Lenght:772: amino acids. Predicted molecular mass: 85,016

Subcellular location: Endoplasmic reticulum lumen.

Modification: Elimination of 24-amino acid signal peptide from N-terminus.

Data Link: UniProtKB Q9LSB4(NAI2_ARATH)

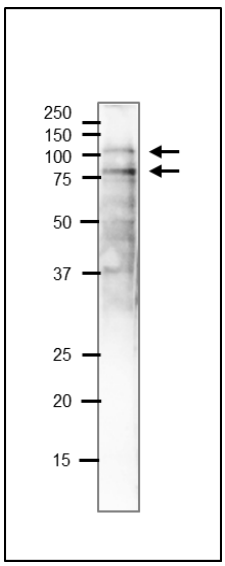

Fig.1 Western Blot of NAI2 in extract of arabidopsis.seedling

Crude extract of 7day old seedling of *Arabidopsis thaliana* was run on 12.5% SDS-PAGE and blotted overnight to PVDF membrane by wet system. Anti-MEB1 antibody was used at 1/4,000 dilution. Secondary antibody (goat anti-rabbit IgG antibody HRP-conjugated, ab97051) was used at 1/10,000 dilution.

Among the two bands the lower band was suggested to be degradation product of the upper band (Ref.1)

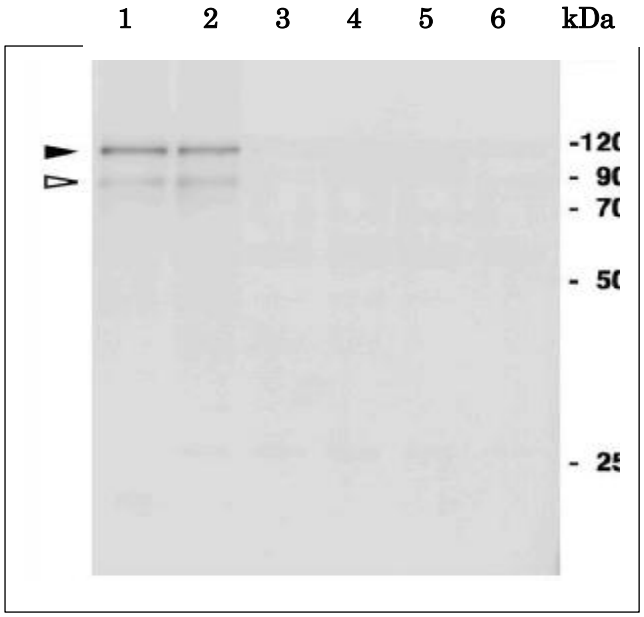

Fig.2 Validation of the anti-NAI2 (ΔSP)the antibody specificity by western blot using extracts of mutant seedling of Arabidopsis.

Total proteins were extracted from 20 plants of 7-d-old seedlings using 200 ml of 23 sample buffer (20 mM Tris-HCl buffer, pH 6.8, 40% glycerol, 2% SDS, and 2% 2-mercaptoethanol). The extracts (10 ml) were subjected to SDS-PAGE (12.5% acrylamide gel). The separated proteins were transferred to a nylon membrane and subjected to western blot analysis using anti-NAI2(ΔSP) antibody at 1/2,000 dilution. As the second antibody, goat anti-rabbit IgG antibody HRP-conjugated was used at 1/10,000 dilution.

Samples. 1. Wild-typ. 2 Wild-type with GFP-h 3.*nai2-1.* 4. *nai2-2.* 5. *nai2-3* 6.*nai1-1*

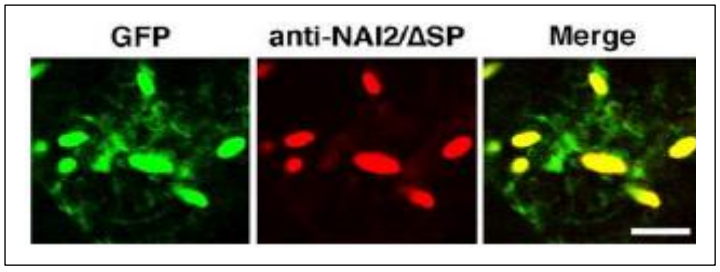

Fig.3 Immunofluorescence staining of NAI peotein in ER bodies.

Immunofluorescence analysis of NAI2 in 7-d-old GFP-h seedlings. Left panels, the ER-targeted GFP signals; middle panels, the NAI2 signals, which were detected by antibodies against NAI2/ΔSP, and Cy3-labeled second antibodies; right panels, the merged images. Bars = 10 mm.

Reference: This antibodyhas been described I Ref.1 and used in the following publications.

1.Yamada K et al. NAI2 is an endoplasmic reticulum body component that enables ER body formation in Arabidopsis thaliana. Plant Cell. 2008 Sep;20(9):2529-40. PMID: 18780803 **WB, IF (Arabidopsis)**

2.Yamada K et al. Identification of two novel endoplasmic reticulum body-specific integral membrane proteins. Plant Physiol. 2013 Jan;161(1):108-20. PMID: 23166355 **WB (Arabidopsis)**

3.Ueda H et al. Endoplasmic Reticulum (ER) Membrane Proteins (LUNAPARKs) are Required for Proper Configuration of the Cortical ER Network in Plant Cells. Plant Cell Physiol. 2018 Oct 1;59(10):1931-1941. PMID: 30010972 **WB (Arabidopsis)**

Related Products

81-101 anti-MEB1 antibody, rabbit polyclonal.

81-102 anti-MEB2 antibody, rabbit polyclonal

81-104 Anti-NAI2 antibody, C-terminal, rabbit polyclonal