SANTA CRUZ BIOTECHNOLOGY, INC.

CAX3 (aC-20): sc-27245

The Power to Question

BACKGROUND

Precise regulation of calcium transporters is essential for modulating the Ca^{2+} signaling network that is involved in the growth and adaptation of all organisms. In plants and fungi, vacuolar transporters help remove potentially toxic cations from the cytosol. Transporter-mediated Ca^{2+} efflux from the cytoplasm is an important component of plant signal transduction. The *Arabidopsis thaliana* cation exchangers, CAX1, CAX2 and CAX3, can transport Ca^{2+} into the vacuole.

REFERENCES

1. Shigaki, T., et al. 2001. Structural determinants of Ca^{2+} transport in the *Arabidopsis* $H+/Ca^{2+}$ antiporter CAX1. J. Biol. Chem. 276: 43152-43159.
2. Cheng, N.H., et al. 2002. Characterization of CAX4, an *Arabidopsis* H^+/cation antiporter. Plant Physiol. 128: 1245-1254.
3. Shigaki, T., et al. 2002. Analysis of the Ca^{2+} domain in the *Arabidopsis* H^+/Ca^{2+} antiporters CAX1 and CAX3. Plant Mol. Biol. 50: 475-483.
4. Pittman, J.K., et al. 2002. Distinct N-terminal regulatory domains of Ca^{2+}/H^+ antiporters. Plant Physiol. 130: 1054-1062.
5. Cheng, N.H., et al. 2003. Cloning and characterization of CXIP1, a novel PICOT domain-containing *Arabidopsis* protein that associates with CAX1. J. Biol. Chem. 278: 6503-6509.
6. Cheng, N.H., et al. 2003. The *Arabidopsis* cax1 mutant exhibits impaired ion homeostasis, development, and hormonal responses and reveals interplay among vacuolar transporters. Plant Cell. 15: 347-364.
7. Cheng, N.H., et al. 2004. Characterization of CXIP4, a novel *Arabidopsis* protein that activates the H^+/Ca^{2+} antiporter, CAX1. FEBS Letts. 559: 99-106.

SOURCE

CAX3 (aC-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CAX3 of *Arabidopsis thaliana* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27245 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

CAX3 (aC-20) is recommended for detection of CAX3 of *Arabidopsis thaliana* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.