product AS10 931
AtPCaP1 | Arabidopsis thaliana plasma membrane cation-binding protein-1

product information

Background
AtPCaP1 is a protein associated with plasma membrane with ability to bind Ca, calmodulin and phosphatidylinositol phosphates. Alternative names: At4g20260, endomembrane-associated protein.

Immunogen
KLH-conjugated peptide derived from Arabidopsis thaliana PCaP1 sequence Q96262, At4g20260

Host
Rabbit

Clonality
Polyclonal

Purity
Serum

Format
Lyophilized

Quantity
100 µl

Reconstitution
For reconstitution add 100 µl of sterile water.

Storage
Store lyophilized/reconstituted at -20°C; once reconstituted 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 lyophilized material adhering to the cap or sides of the tubes.

Tested applications
Western blot (WB)

Related products
antibodies to plasma membrane proteins
Plant protein extraction buffer
Secondary antibodies

Additional information
Serum contains less than 0.1 % of sodium azide as preservative.

Application information

Recommended dilution
1 : 2000 (WB)

Expected | apparent MW
24.5 | 36 kDa

Confirmed reactivity
Arabidopsis thaliana, Raphanus sativus (41 kDa), Brassica rapa (42 kDa), Brassica rapa var. glabra Regel (43 kDa), Brassica oleracea var. italica (41 kDa)

Predicted reactivity
Brassicaceae

Not reactive in
No confirmed exceptions from predicted reactivity are currently known.

Additional information
It is confirmed that the knock-out mutant (SALK_022955, Col-0 background) has no mRNA or protein of PCaP1. In the immunoblot, crude membrane fractions prepared from wild-type and pcap1 knock-out mutant plants were examined. Therefore the antibody to PCaP1 specifically recognizes PCaP1 and can be used for immunoblotting. For application in immunocytochemistry cross reacting band in proximity of Rubisco has to be removed by incubation of an antibody with a part of membrane with background band.

Protocol for preparation of crude membranes
This protocol will help to prepare crude membrane fractions from very small amount of plant tissue.
(1) Homogenize roots or root tips with the buffer without SDS.
(2) Centrifuge the homogenate in Eppendorf tubes at 2 000 rpm for 2 min to remove cell wall, nuclei, plastids and mitochondria.
(3) Centrifuge the obtained supernatant at 30 000 g for 20 min to separate soluble components. Please use adequate tubes for ultracentrifugation.
(4) Suspend the obtained precipitate (crude membranes) with SDS buffer with DTT or beta-mercaptoethanol.
(5) Heat the sample solution obtained in step (4) at 70°C for 5 min.
(6) Apply the denatured sample to SDS-PAGE.

Selected references
