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AHK3 (N) Antibody, Rabbit Polyclonal

Cat#: R3444-1

Lot#: Refer to vial

Quantity: 100 ul

Application: WB

Predicted I Observed M.W.: 116 kDa

Uniprot ID: Q9C5U1

Background:

AHK3 is a cytokinins (CK) receptor related to bacterial two-component regulators. AHK3 functions as a histidine kinase and transmits the stress signal to a downstream MAPK cascade. AHK3 undergoes an ATP-dependent autophosphorylation at a conserved histidine residue in the kinase core, and a phosphoryl group is then transferred to a conserved aspartate residue in the receiver domain. In the presence of cytokinin, AHK3 feeds phosphate to phosphorelay-integrating histidine phosphotransfer protein (HPt) and activates subsequent cascade. AHK3 is involved in meristems establishment in seedlings. AHK3 is a redundant negative regulator of drought and salt stress responses and abscisic acid (ABA) signaling. Together with AHK2, AHK3 plays a negative regulatory role in cold stress signaling via inhibition of ABA response, occurring independently of the cold acclimation pathway. AHK3 is a redundant positive regulator of cytokinin signaling that regulates many development process including seed germination, cell division, seed size, chlorophyll retention during leaf senescence, root repression and shoot promotion.

Other Names:

Histidine kinase 3, Arabidopsis histidine kinase 3, AtHK3, Protein AUTHENTIC HIS-KINASE 3, Protein ORESARA 12, ORE12, At1g27320, F17L21.11

Source and Purity:

Rabbit polyclonal antibodies were produced by immunizing animals with a GST-fusion protein containing the N-terminal region of *arabidopsis thaliana* AHK3 (AT1G27320). Antibodies were purified by affinity purification using immunogen.

Storage Buffer and Condition:

Supplied in 1 x PBS (pH 7.4), 100 ug/ml BSA, 40% Glycerol, 0.01% NaN_3. Store at -20 °C. Stable for 6 months from date of receipt.

Tested Applications:

WB: 1:500-1:2,000 (detect endogenous protein*)

*: The apparent protein size on WB may be different from the calculated M.W. due to modifications.

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Species Specificity:

Arabidopsis thaliana

Product Data:

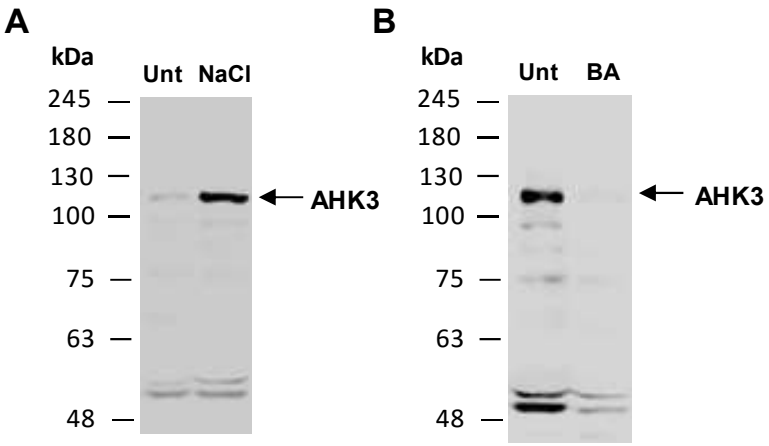

Fig 1. A) *Western blot of equal amounts of protein extracts from from wild type arabidopsis whole plants either untreated (Unt) or treated with 250mM NaCl for 16 h, using anti-AHK3 (N) (R3444-1) at RT for 2 h. AHK3 is known to be induced by high salinity stress (Tran et al., PNAS, 2007, 104:20623-20628.)* ***B)*** *Same as in* ***A*** *except that protein extracts from leaves of WT arabidopsis grown in the absence (Unt) or presence of 20 uM of Benzyladenine (BA) for 17 h were used. AHK3 is degraded upon prolonged BA treatment.*