



Anti- CESA3 (Cellulose synthase A catalytic subunit 3) Phospho-Polyclonal Antibody

Category: Phospho-Polyclonal Antibody

Catalog #: T227 Phospho-AB2J041

Antigen Synonym: ATHB, CEV1, ELI1, IXR1, K2A11.4, RSW5

Species Reactivity: Plant Thale cress (*Arabidopsis thaliana*)

Immunogen/Specificity:

Polyclonal antibody produced in rabbits immunizing with a synthetic peptide corresponding to N-terminal residues of Plant Thale cress (*Arabidopsis thaliana*) CESA3 (Cellulose synthase A catalytic subunit 3)

Description: CESA3 (Cellulose synthase A catalytic subunit 3) is a catalytic subunit of cellulose synthase terminal complexes ('rosettes'), CESA3 (Cellulose synthase A catalytic subunit 3) is required for beta-1,4-glucan microfibril crystallization, a major mechanism of the cell wall formation. CESA3 (Cellulose synthase A catalytic subunit 3) is involved in the primary cell wall formation, especially in roots. CESA3 is expressed in young plants, flowers and roots, and to a lower extent in leaves and stems. CESA3 is localized in all cells except meristematic cells. Accumulates particularly in root caps, root hairs, epidermal layer, midveins of leaves and anthers. Not present in old tissues. CESA3 is mostly expressed in cotyledons during all steps of embryogenesis, and decrease toward the bent-cotyledon stage. Mutants *cev1* are dark green and contains more jasmonates and ethylene, that leads to shorter and thickened hypocotyls and roots, with prolific root hairs, and the accumulation of purple anthocyanins. They exhibit constitutive and high expression in leaves lamina of vegetative storage proteins (VSP1 and VSP2), basic chitinase CHI-B and plant defensin PDF1.2. In addition, this mutation confers resistance to powdery mildew pathogens such as *E.cichoracearum*, *E.orontii* and *O.lycopersicum*, to the bacterial pathogen *P.syringae* pv *maculicola*, and also to the green peach aphid *M.persicae*.

Reference:

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