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Agrisera AB | Box 57 | SE-91121 Vännäs | Sweden | +46 (0)935 33 000 | www.agrisera.com

Product no AS11 1783

ACD1 | Accelerated cell death 1

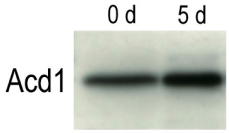
Product information

Immunogen	Recombinant PaO from *Arabidopsis thaliana* Q9FYC2, At3g44880
Host	Rabbit
Clonality	Polyclonal
Purity	Serum
Format	Lyophilized
Quantity	50 µl
Reconstitution	For reconstitution add 50 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 the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.
Additional information	The protein level is moderately induced during dark-induced senescence

Application information

Recommended dilution	1 : 5000 (WB)
Expected | apparent MW	61 | 54 kDa
Confirmed reactivity	*Arabidopsis thaliana*
Predicted reactivity	*Brassica napus, Solanum lycopersicum, Nicotiana tabacum* Species of your interest not listed? Contact us
Not reactive in	*Pinus strobus*
Additional information	This antibody works on total cell extracts and can be used as a senescence marker. Predicted size of Acd1 precursor protein is about 61 kD including the transit peptide, but it must be processed to a smaller size. Using fresh extracts is recommended to decrease possible cross-reaction with Rubisco.
Selected references	Fukura et al. (2021) Enrichment of chlorophyll catabolic enzymes in grana margins and their cooperation in catabolic reactions. J Plant Physiol. 2021 Nov;266:153535. doi: 10.1016/j.jplph.2021.153535. Epub 2021 Sep 25. PMID: 34607178. Kim et al. (2013). Mutation of the Arabidopsis NAC016 Transcription Factor Delays Leaf Senescence.'Plant Cell Physiol. Aug 21. Nagane et al. (2010). Involvement of AtNAP1 in thre reulation of chlorophyll degradation in Arabiopsis thaliana. Planta (4):939-949. Hirashima et al. (2009). Light-independent cell death induced by accumulation of pheophorbide a in Arabidopsis thaliana. Plant Cell Physiol. (4):719-729.

application example



Arabidopsis thaliana wild ecotype Columbia was grown for four weeks under continuous illumination and then transferred to complete darkness for five days. Several leaves were harvested from the plants before they were transferred to darkness (0 d) or after they were kept for five days (5 d). Protein was extracted with the SDS extraction solution containing 50 mM Tris (pH 6.8), 10% (w/v) glycerol, 2% (w/v) SDS and 6% (v/v) 2-mercaptoethanol. Protein extract equivalent to 1 mg leaf material was loaded and separated on 14% SDS-PAGE and blotted 1h to PVDF. Blots were blocked with PBS-T containing 1.5% skim milk for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 10 000 for 1h at RT with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and 3 times for 5 min in PBS-T at RT with agitation. Blot was incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, from GE Healthcare) diluted to 1:20 000 in for 1h at RT with agitation. The blot was washed as above and developed for 1 min with ECLplus according to the manufacturers instructions. Exposure time was 5 min.

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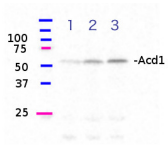

Arabidopsis thaliana wild ecotype Columbia was grown for four weeks under continuous illumination. Several young **(1)**, mature **(2)** and senescing **(3)** leaves were harvested from the plants. Protein was extracted with the SDS extraction solution containing 50 mM Tris (pH 6.8), 10% (w/v) glycerol, 2% (w/v) SDS and 6% (v/v) 2-mercaptoethanol. Protein extract equivalent to 1 mg leaf material was loaded and separated on 14% SDS-PAGE and blotted 1h to PVDF. Blots were blocked with PBS-T containing 1.5% skim milk for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1:30 000 for 1h at RT with agitation as indicated in the figure. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and 3 times for 5 min in PBS-T at RT with agitation. Blot was incubated in the secondary antibody provided by AgriSera (AS09 602) diluted to 1:20 000 in for 1h at RT with agitation. The blot was washed as above and developed for 1 min with ECLplus according to the manufacturers instructions. Exposure time was 5 min.

Courtesy of Kaori Takahashi at Hokkaido University, Japan