Agrisera
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This product is **for research use only** (not for diagnostic or therapeutic use) **contact: support@agrisera.com**

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Product no AS10 685

ADH | Alcohol dehydrogenase (hypoxia marker)

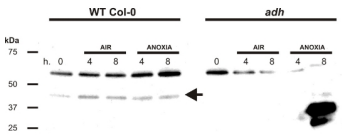
Product information

Immunogen	KLH-conjugated peptide derived from available ADH sequences including *Arabidopsis thaliana* P06525, At1g77120
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	This product can be sold containing ProClin if requested

Application information

Recommended dilution	1 : 3000 (WB)
Expected | apparent MW	42 | 42 kDa (*Arabidopsis thaliana*)
Confirmed reactivity	*Arabidopsis thaliana, Fragaria vesca, Oryza sativa, Phaseolus vulgaris, Solanum lycopersicum*
Predicted reactivity	Species of your interest not listed? Contact us
Not reactive in	Allyl alcohol dehydrogenase of *Nicotiana tabacum*, accession 75206691 and in *Chlamydomonas reinhardtii*.
Selected references	Zhang et al. (2024). BIG enhances Arg/N-degron pathway-mediated protein degradation to regulate Arabidopsis hypoxia responses and suberin deposition. Plant Cell. 2024 Apr 12:koae117. doi: 10.1093/plcell/koae117. Czernicka et al. (2022). Proteomic Studies of Roots in Hypoxia-Sensitive and -Tolerant Tomato Accessions Reveal Candidate Proteins Associated with Stress Priming. Cells. 2022 Jan 31;11(3):500. doi: 10.3390/cells11030500. PMID: 35159309; PMCID: PMC8834170. Ventura et al. (2020). Arabidopsis phenotyping reveals the importance of alcohol dehydrogenase and pyruvate decarboxylase for aerobic plant growth. Sci Rep. 2020 Oct 7;10(1):16669. doi: 10.1038/s41598-020-73704-x. PMID: 33028901; PMCID: PMC7542448. Gil-Monreal et al. (2019). ERF-VII transcription factors induce ethanol fermentation in response to amino acid biosynthesis-inhibiting herbicides. J Exp Bot. 2019 Aug 6. pii: erz355. doi: 10.1093/jxb/erz355. Bui et al. (2019). Conservation of ethanol fermentation and its regulation in land plants. J Exp Bot. 2019 Feb 28. pii: erz052. doi: 10.1093/jxb/erz052. De la Rosa et al. (2019), A dicistronic precursor encoding miR398 and the legume-specific miR2119 coregulates CSD1 and ADH1 mRNAs in response to water deficit. Plant Cell Environ. 2019 Jan;42(1):133-144. doi: 10.1111/pce.13209.

Application example



20 µg of total protein from *Arabidopsis thaliana* seedlings (0-4-8 hours of anoxic treatment with aerobic control) of WT Col-0 and adh mutant extracted with an SDS Extraction Buffer (60mM Tris-HCl pH 8.0, 2% SDS, 1,5% Sucrose) were separated on XT CRITERION 10%Bis-Tris (BioRad) SDS-PAGE and blotted 1h to PVDF. Blot was blocked immediately in milk in TBS-T for 1h at room temperature (RT) with agitation. Blot was incubated in the anti-ADH antibodies at a diluition of 1: 3000 in milk in TBS-T for 3h at RT with agitation. Blot was incubated in secondary antibody (goat anti-rabbit IgG HRP conjugated from Agrisera, AS09 602) diluited 1:20 000 in milk in TBS-T for 50 min at RT and then washed as above and developed for 2 min with chemiluminescent detection reagent. Images of the blot were obtained using BioSpectrum AC Imaging System (UVP). Exposure time was 10 min The arrow indicates ADH (42kDa, as expected) . There is a cross reacting band in *Arabidopsis thaliana* between 50-70 kDa. *The large band in the right corner of the membrane is likely a staining artefact.*

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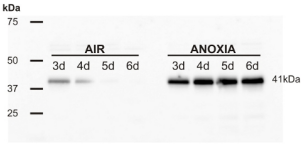

20 µg of total protein from *Orysa sativa* coleoptiles (3-4-5-6 days of germination under aerobic and anoxic conditions) extracted with an SDS Extraction Buffer (60mM Tris-HCl pH 8.0, 2% SDS, 1,5% Sucrose) were separated on XT CRITERION 10% Bis-Tris (BioRad) SDS-PAGE and blotted 1h to PVDF. The blot was blocked immediately in milk in TBS-T for 1h at room temperature (RT) with agitation. Blot was incubated in the anti-ADH antibodies at a diluition of 1: 3000 in milk in TBS-T for over night with agitation. Blot was incubated in secondary antibody (goat anti-rabbit IgG HRP conjugated from Agrisera, AS09 602) diluted 1:20 000 in milk in TBS-T for 50 min at RT and then washed as above and developed for 2 min with chemiluminescent detection reagent. Images of the blot were obtained using BioSpectrum AC Imaging System (UVP). Exposure time was 10 min. The band corresponds to ADH (41 kDa).

Courtesy Dr. Eleonora Paparelli,Scuola Superiore Sant'Anna, Italy