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Product no **AS10 704**

PsbA | D1 protein of PSII, DE-loop

Product information

Immunogen	KLH-conjugated synthetic peptide, amino acids 234-242 of <i>Arabidopsis thaliana</i> D1 protein UniProt: P83755 , TAIR: AtCg00020
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 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.
Additional information	Antibody will detect 23 kDa N-terminal fragment

Application information

Recommended dilution	1 : 10 000, thylakoid fraction (WB)
Expected apparent MW	38 28-30 kDa
Confirmed reactivity	<i>Arabidopsis thaliana</i> , <i>Chlamydomonas reinhardtii</i> , <i>Hordeum vulgare</i> , <i>Medicago truncatula</i> , <i>Nannochloropsis oceanica</i> strain IMET1, <i>Neochloris oleoabundans</i> UTEX 1185 (chlorophyta), <i>Physcomitrella patens</i> , <i>Pisum sativum</i> , <i>Silene vulgaris</i> , <i>Sinapis alba</i> , <i>Spinacia oleracea</i> , <i>Synechococcus</i> sp. PCC 7942, <i>Synechocystis</i> sp. PCC6803, <i>Triticum</i> sp.
Predicted reactivity	<i>Cucumis sativus</i> , <i>Glycine max</i> , <i>Nannochloropsis</i> sp., <i>Nicotiana tabacum</i> , <i>Oryza sativa</i> , <i>Populus balsamifera</i> , <i>Ricinus communis</i> , <i>Zea mays</i> , <i>Vitis vinifera</i> Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known.
Additional information	Antibody is recognizing a 23 kDa fragment in spinach and <i>Arabidopsis</i> thylakoids for usage on total cell extracts the dilution needs to be determined experimentally. For high resolution images, please visit the specific product page at www.agrisera.com
Selected references	Grieco et al. (2020). Adjustment of photosynthetic activity to drought and fluctuating light in wheat. <i>Plant Cell Environ.</i> 2020 Mar 16. doi: 10.1111/pce.13756. Rantala et al. (2020). PGR5 and NDH-1 systems do not function as protective electron acceptors but mitigate the consequences of PSI inhibition. <i>Biochim Biophys Acta Bioenerg.</i> 2020 Jan 11;1861(3):148154. doi: 10.1016/j.bbabi.2020.148154. Liang et al. (2018). Thylakoid-Bound Polysomes and a Dynamin-Related Protein, FZL, Mediate Critical Stages of the Linear Chloroplast Biogenesis Program in Greening <i>Arabidopsis</i> Cotyledons. <i>Plant Cell.</i> 2018 Jul;30(7):1476-1495. doi: 10.1105/tpc.17.00972. Epub 2018 Jun 7. Rantala and Tikkanen et al. (2018). Phosphorylation induced lateral rearrangements of thylakoid protein complexes upon light acclimation. <i>Plant Direct</i> Vol. 2, Issue 2. Wu et al. (2018). Control of Retrograde Signaling by Rapid Turnover of GENOMES UNCOUPLED 1. <i>Plant Physiol.</i> 2018 Jan 24. pii: pp.00009.2018. doi: 10.1104/pp.18.00009. Giovanardi et al. (2017). Higher packing of thylakoid complexes ensures a preserved Photosystem II activity in mixotrophic <i>Neochloris oleoabundans</i> . <i>Algal Research</i> , Volume 25, July 2017, Pages 322-332. Kale et al. (2017). Amino acid oxidation of the D1 and D2 proteins by oxygen radicals during photoinhibition of Photosystem II. <i>Proc Natl Acad Sci U S A.</i> 2017 Mar 14;114(11):2988-2993. doi: 10.1073/pnas.1618922114. Mazur et al. (2016). Overlapping toxic effect of long term thallium exposure on white mustard (<i>Sinapis alba</i> L.) photosynthetic activity. <i>BMC Plant Biol.</i> 2016 Sep 2;16(1):191. doi: 10.1186/s12870-016-0883-4.

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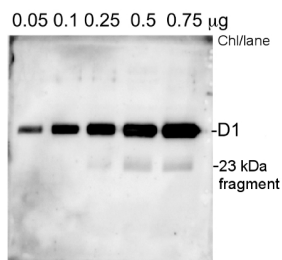
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- [Kowalewska et al. \(2016\)](#). Three-dimensional visualization of the internal plastid membrane network during runner bean chloroplast biogenesis. Dynamic model of the tubular-lamellar transformation. *The Plant Cell* March 21, 2016 tpc.01053.2015.
- [Fristedt et al. \(2015\)](#). The thylakoid membrane protein CGL160 supports CF1CF0 ATP synthase accumulation in *Arabidopsis thaliana*. *PLoS One*. 2015 Apr 2;10(4):e0121658. doi: 10.1371/journal.pone.0121658.
- [Karlsson et al. \(2015\)](#). The *Arabidopsis* thylakoid transporter PHT4;1 influences phosphate availability for ATP synthesis and plant growth. *Plant J*. 2015 Aug 8. doi: 10.1111/tpj.12962.
- [Malnoë et al. \(2014\)](#). Thylakoid FtsH Protease Contributes to Photosystem II and Cytochrome b6f Remodeling in *Chlamydomonas reinhardtii* under Stress Conditions. *Plant Cell*, Jan 21.
- [Sobrinho-Plata et al. \(2014\)](#). Glutathione is a key antioxidant metabolite to cope with mercury and cadmium stress. *Plant Soil*, DOI 10.1007/s11104-013-2006-4.
- [Block et al. \(2013\)](#). Functional Modeling Identifies Paralogous Solanesyl Diphosphate Synthases that Assemble the Side Chain of Plastoquinone-9 in Plastids. *J Biol Chem*. Aug 2.
- [Spetea et al. \(1999\)](#). GTP bound to chloroplast thylakoid membranes is required for light-induced, multienzyme degradation of the photosystem II D1 protein. *PNAS* 96: 6547-6552.

Application example



Thylakoid membranes from *Arabidopsis* (0.05-0.75 µg of Chl) were separated on 14%AA+ 6M urea gels and blotted 1h to PVDF. Blots were blocked immediately following transfer in 5% milk solution for 1h at room temperature with agitation. Blots were incubated in the primary antibody at a dilution of 1: 20 000 o.n. at 4°C 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 TBS-T at room temperature with agitation. Blots were incubated in secondary antibody, HRP conjugated, diluted to 1:5 000. The blots were washed as above and developed for 5 min with ECL-Plus detection reagent according to the manufacturers instructions. Exposure time was 1 min in CCD camera Fuji4000.

Courtesy Professor Cornelia Spetea-Wiklund, University of Ghotenburg, Sweden