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product AS04 046

PsaD | PSI-D subunit of photosystem I

product information

background	**PsaD** (PSI-D) is a core subunit of photosystem I highly conserved in all photosynthetic organisms (including bacteria with Fe-S type reaction centers). In eukaryots its encoded by 1 to 2 nuclear gene(s) and imported as a precursor into the chloroplast. In the thylakoid membrane it associates with PsaA and PsaB on the stromal site of the PSI core forming the Fd-docking site. PsaD is also required for the stable assembly of PsaC.
immunogen	native mature 18 kDa PSI-D protein from *Hordeum vulgar*e (AAA18567), purified from thylakoids
antibody format	rabbit polyclonal, total IgG in PBS pH 7.4, lyophilized
quantity	100 µl - for reconstitution add 100 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.
tested applications	western blot (WB)
additional information	PsaD has frequently been used as a marker for intact PSI reaction centers.

application information

recommended dilution	1 : 2000 - 1 : 5000 with standard ECL detection (WB)
expected | apparent MW	17.9 kDa
confirmed reactivity	*Arabidopsis thaliana, Hordeum vulgare, Spinacia oleracea, Chlamydomonas reinhardtii*
predicted reactivity	plants (monocots, dicots and conifers), *Physcomitrella patens*, green algae (including *Chlamydomonas reinhardtii*),
not reactive in	*Synechococcus elongatus* sp. PCC 7942
additional information	to be added when available
selected references	Andersen et al. (1992). Structural and functional analysis of the reducing side of photosystem I. Physiol Plant 84: 154-161. Fuhrmann et al. (2009). Thylakoid Membrane Reduction Affects the Photosystem Stoichiometry in the Cyanobacterium Synechocystis sp. PCC 6803. Plant Physiol 2: 735-744.

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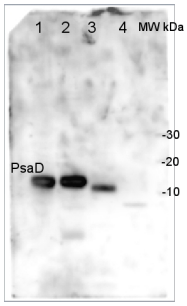
application example



2 µg of total protein from (**1**) *Arabidopsis thaliana* leaf extracted with PEB (**AS08 300**),(**2**) *Horderum vulgare* leaf extracted with PEB (**AS08 300**), (**3**) *Chlamydomonas reinhardtii* total cell extracted with PEB (**AS08 300**), (4) *Synechococcus* sp. 7942 total cell extracted with PEB (**AS08 300**) were separated on **4-12%** NuPage (Invitrogen) **LDS-PAGE** and blotted 1h to **PVDF**. Blots were blocked immediately following transfer in 2% ECL Advance blocking reagent (GE Healthcare) in 20 mM Tris, 137 mM sodium chloride pH 7.6 with 0.1% (v/v) Tween-20 (TBS-T) for 1h at room temperature with agitation. Blots were incubated in the **primary antibody at a dilution of 1: 10 000** for 1h at room temperature 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 (anti-rabbit IgG horse radish peroxidase conjugated, from Abcam) diluted to 1:20 000 in 2% ECL Advance blocking solution for 1h at room temperature with agitation. The blots were washed as above and developed for 5 min with ECL Advance detection reagent according the manufacturers instructions. Images of the blots were obtained using a CCD imager (FluorSMax, Bio-Rad) and Quantity One software (Bio-Rad).