

product **AS06 172**

PsaA | PSI-A core protein of photosystem I

product information

background	PsaA is a core protein of photosystem I. In plants and cyanobacteria, the primary step in oxygenic photosynthesis, the light induced charge separation, is driven by two large membrane intrinsic protein complexes, the photosystems I and II. Synonym: Photosystem I P700 chlorophyll a apoprotein A1.
immunogen	N-terminal part of recombinant PsaA protein from <i>Chlamydomonas reinhardtii</i> P12154
antibody format	rabbit polyclonal serum lyophilized
quantity	200 µl for reconstitution add 200 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), immunogold (IG)
additional information	PsaA is a hydrophobic protein and we recommend to use PVDF membrane for transfer to assure best results

application information

recommended dilution	1: 1000 with standard ECL (WB), 1: 20 (IG)
expected apparent MW	82 55-60 kDa
confirmed reactivity	<i>Arabidopsis thaliana</i> , <i>Hordeum vulgare</i> , <i>Pisum sativum</i> , <i>Phaseolus vulgaris</i> , <i>Spinacia oleracea</i> , <i>Chlamydomonas reinhardtii</i> , <i>Synechococcus</i> PCC 7942, <i>Synechocystis</i> PCC 6803
predicted reactivity	dicots including: <i>Lycopersicon esculentum</i> , monocots including: <i>Oryza sativa</i> , <i>Triticum aestivum</i> trees: <i>Picea spinulosa</i> , <i>Pinus thunbergii</i> , <i>Populus alba</i> , <i>Citrus x limon</i> moss: <i>Physcomitrella patens</i> , algae, cyanobacteria
not reactive in	

additional information

no confirmed exceptions from predicted reactivity known in the moment

selected references

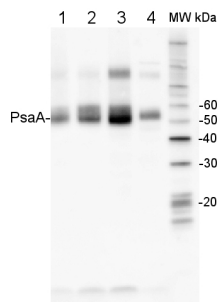
immunogold localization has been done in leaf material of *Arabidopsis thaliana*

Rudowska et al. (2012). Chloroplast biogenesis - correlation between structure and function. BBA, available on line, March 2012.

Pollari et al. (2011). Effects of deficiency and overdose of group 2 sigma factors in triple inactivation strains of *Synechocystis* sp. strain PCC 6803. J Bacteriol. 193(1):265-273.

Fristedt et al. (2009). Phosphorylation of photosystem II controls functional macroscopic folding of photosynthetic membranes in *Arabidopsis*. Plant Cell 21:3950-3964

application example



2 μ g of total protein from **(1)** *Arabidopsis thaliana* leaf, **(2)** *Hordeum vulgare* leaf, **(3)** *Chlamydomonas reinhardtii* total cell, **(4)** *Synechococcus* sp. 7942 total cell all extracted with Protein Extraction Buffer, 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, recommended secondary antibody [AS09 602](#)) diluted to 1:50 000 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 to the manufacturers instructions. Images of the blots were obtained using a CCD imager (FluorSMax, Bio-Rad) and Quantity One software (Bio-Rad). Exposure time was 10 seconds.