

product **AS09 533**
PsbS | 22 kDa Lhc-like PSII protein

product information

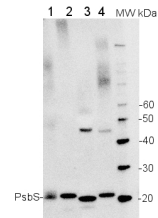
background	The 22 kDa PsbS protein of photosystem II functions in the regulation of photosynthetic light harvesting. Along with a low thylakoid lumen pH and the presence of de-epoxidized xanthophylls, PsbS is necessary for photoprotective thermal dissipation of excess absorbed light energy in plants, measured as non-photochemical quenching of chlorophyll fluorescence.
immunogen	<u>KLH</u> -conjugated synthetic peptide derived from available di and monocot PsbS sequences, including <i>Arabidopsis thaliana</i> (<u>At1g44575</u>)
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)
additional information	to be added when available

application information

recommended dilution	1 : 2000 with standar ECL (WB)
expected apparent MW	28 22 kDa for <i>Arabidopsis thaliana</i>
confirmed reactivity	dicots including: <i>Arabidopsis thaliana</i> , <i>Ricinus communis</i> , <i>Spinacia oleracea</i> , monocots including: <i>Hordeum vulgare</i> , <i>Zea mays</i>
predicted reactivity	dicots including: <i>Nicotiana tabacum</i> , <i>Solanum lycopersicum</i> , <i>Vitis vinifera</i> , monocots including: <i>Oryza sativa</i> , trees: <i>Picea sitchensis</i> , <i>Populus balsamifera</i> , moss: <i>Physcomitrella patens</i> , algae: <i>Chlamydomonas reinhardtii</i>
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	to be added when available
selected references	<u>Zienkiewicz</u> et al. (2011). High light stimulates Deg1-dependent cleavage of the minor LHCII antenna proteins CP26 and CP29 and the PsbS protein in <i>Arabidopsis thaliana</i> . <i>Planta</i> Aug 30.

application example

5 µg of total extract from (1) *Arabidopsis thaliana* leaf, (2) *Spinacia oleracea* (3) *Hordeum vulgare* (4) *Zea mays* 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 1:50 000 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 30 seconds.



application example

15 µg of total extract from (1) *Arabidopsis thaliana* leaf, (2) *Arabidopsis thaliana* thylakoid fraction (3) *Arabidopsis thaliana* NPQ4 mutant thylakoids (4) *Arabidopsis thaliana* PsbS overexpression mutant 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: 20 000 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 1:50 000 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 30 seconds.

