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contact: support@agrisera.com

Agrisera AB | Box 57 | SE-91121 Vännas | Sweden | +46 035 33033 | www.agrisera.com

product AS03 032R

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.

KLH-conjugated synthetic peptide derived from available di and monocot PsbS immunogen

sequences, including Arabidopsis thaliana (At1g44575)

antibody format rabbit polyclonal, affinity purified serum in PBS pH 7.4, lyophilized

200 μl - for reconstitution add 200 μl of sterile water quantity

store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid storage

> 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

1: 2000 with standar ECL (WB) recommended dilution

expected | apparent 28 | 22 kDa for Arabidopsis thaliana

confirmed reactivity Arabidopsis thaliana

predicted reactivity di and monocots

Chlamydomonas reinhardtii, Chlorella not reactive in

additional information to be added when available

Sirpiö et al. (2007) TLP18.3, a novel thylakoid lumen protein regulating selected references

photosystem II repair cycle. Biochem J 406: 415-425

Sato et al. (2007) Mendel's green cotyledon gene encodes a positive regulator of

the chlorophyll-degrading pathway. PNAS 104: 14169-14174

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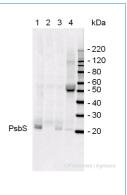
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application example

15 μg of Arabidopsis thaliana thylakoids from (1) PsbS-overexpressing line, (2) PsbS-deficient npq4-line, and (3) wt (col) together with (4) total leaf protein from Arabidopsis thaliana wt extracted with PEB (AS08 300) were separated on 4-12% NuPage (Invitrogen) LDS-PAGE and blotted 1h to nitrocellulose. Filters were blocked 1h with 2% low-fat milk powder in TBS-T (0.1% TWEEN 20) and probed with anti-PsbS (AS03 032, 1:2000, 1h) and secondary anti-rabbit (1:20000, 1 h) antibody (HRP conjugated, Abcam) in TBS-T containing 2% low fat milk powder. Antibody incubations were followed by washings in TBS-T (15, +5, +5 min). All steps were performed at RT with agitation. Signal was detected with standard ECL (GE Healthcare) using a Fuji LAS-3000 CCD (300s, standard sensitivity). Technical note(s): the IgG reacts with 2 bands in thylakoids from overexpresser (1) and wt (3) that both are absent in the PsbS-deficient npq4 line (2) and therefore both might represent PsbS-forms with a difference in molecular weight of ~1 kDa.



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