

product **AS04 038**  
**PsbB | CP47 protein of PSII**

## product information

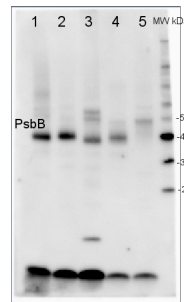
<b>background</b>	<b>PsbB</b> (CP47) is a chlorophyll-binding protein located in the membrane, where it serves as the core antenna of Photosystem II.
<b>immunogen</b>	<u>KLH</u> -conjugated synthetic peptide derived from available plant, algal and cyanobacterial PsbB sequences including <i>Arabidopsis thaliana</i> <u>AtCg00680</u> , <i>Hordeum vulgare</i> <u>P10900</u> , <i>Oryza sativa</i> <u>P0C364</u> , <i>Synechocystis</i> PCC 6803 <u>P05429</u>
<b>antibody format</b>	rabbit polyclonal serum, lyophilized
<b>quantity</b>	50 µl for reconstitution add 50 µl of sterile water.
<b>storage</b>	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.
<b>tested applications</b>	western blot (WB)
<b>additional information</b>	to be added when available

## application information

<b>recommended dilution</b>	1: 2000 (WB)
<b>expected   apparent MW</b>	56 kDa
<b>confirmed reactivity</b>	<i>Arabidopsis thaliana</i> , <i>Hordeum vulgare</i> , <i>Physcomitrella patens</i> , <i>Chlamydomonas reinhardtii</i> , <i>Synechococcus</i> PCC7942, 6803, <i>Anabaena</i> 7120, diatoms
<b>predicted reactivity</b>	dicots including <i>Pisum sativum</i> , <i>Glycine max</i> and monocots including <i>Oryza sativa</i> , conifers, algae, cyanobacteria
<b>not reactive in</b>	no confirmed exceptions from predicted reactivity known in the moment
<b>additional information</b>	in bis-tris gel systems PsbB protein migrates between 40-45 kDa
<b>selected references</b>	<u>Yamamuchi</u> et al. (2011). Plants switch photosystem at high temperature to protect photosystem II. Nature Proceedings in press. <u>Yoshioka</u> et al. (2010). Quality control of photosystem II: FtsH hexamers are localized near photosystem II at grana for the swift repair of damage. J Biol Chem 285(53): 41972-41981.

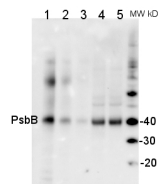
### application example

**2 µg of total protein** from (1) *Arabidopsis thaliana* leaf extracted with PEB (**AS08 300**), (2) *Hordeum 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**), (5) *Anabaena* sp. 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: 50 000 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 the manufacturers instructions. Images of the blots were obtained using a CCD imager (FluorSMax, Bio-Rad) and Quantity One software (Bio-Rad).



### application example

**0.2 µg of chlorophyll** from (4,5) *Arabidopsis thaliana* leaf extracted with PEB (**AS08 300**), (1) 500 fmol of PsbB protein standard, (2) 200 fmol of **PsbB protein standard**, (3) 75 fmol of PsbB protein standard 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: 50 000 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 manufacturer's instructions. Images of the blots were obtained using a CCD imager (FluorSMax, Bio-Rad) and Quantity One software (Bio-Rad).