

Product no **AS05 084A-DL650****PsbA | D1 protein of PSII, C-terminal, DyLight® 650 conjugated (40 µg)****Product information**

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| <b>Immunogen</b> | <i>Anabaena 7120, Arabidopsis thaliana, Artemisia annua, Arundo sp., Chlamydomonas reinhardtii, Colobanthus quitensis Kunt Bartl, Coscinodiscus wailesii, Craterostigma sp., Ditylum brightwellii, Glycine max, Hordeum vulgare, Lindernia sp., Miscanthus x giganteus, Marchantia polymorpha (liverwort), Nicotiana benthamiana, Panicum miliaceum, Panax ginseng, Panicum maximum, Pinus strobus, Physcomitrella patens, Synechococcus sp, PCC 7942, Paulinella chromatophora (amoeba), Prochlorococcus sp, (surface and deep water ecotype), Spirodela polyrhiza, Symbiodinium sp., Zea mays</i> |
| <b>Host</b>      | Rabbit  |
| <b>Clonality</b> | Polyclonal  |
| <b>Purity</b>    | Immunogen affinity purified serum, in PBS pH 7.4, conjugated to DyLight® 650.   |
| <b>Format</b>    | Liquid in PBS pH 7.4.   |
| <b>Quantity</b>  | 40 µg   |
| <b>Storage</b>   | Store at 4°C for 12-18 months, A preservative may be added for long time storage up to 2 years. Shortly spin the tube before use.   |

**Additional information** Due to biology of PsbA (D1) protein a number of degradation products can appear in a sample and may be observed when using anti-PsbA antibodies, including products having apparent molecular weights of 24kDa and 16kDa. D1 degradation is a complex set of events and the products observed can be influenced by both the extraction procedure and the physiology of the cells prior to harvest. Third, cross-linking may occur between D1 and cytochrome b559, shifting the protein higher in the gel. In cyanobacteria (PCC7942), three different bands were competed out by preincubating the antibody with the PsbA free peptide, indicating that all bands are indeed PsbA and its precursors or breakdown products. Competition assays were also performed with spinach and Chlamydomonas, confirming the identity of PsbA bands. Anti-PsbA antibodies will not detect D2 protein, as the peptide used to generate PsbA antibodies has no homology to the D2 sequence.

DyLight® 650 has Amax = 652 nm, Emax = 672 nm. DyLight® is a registered trademark of ThermoFisher Inc., and its subsidiaries.

**Application information**

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| <b>Recommended dilution</b>   | To be determined by end user   |
| <b>Expected   apparent MW</b> | 38   28-30 kDa   |
| <b>Confirmed reactivity</b>   | <i>Anabaena 7120, Arabidopsis thaliana, Artemisia annua, Arundo sp., Chlamydomonas reinhardtii, Colobanthus quitensis Kunt Bartl, Coscinodiscus wailesii, Craterostigma sp., Ditylum brightwellii, Glycine max, Hordeum vulgare, Lindernia sp., Miscanthus x giganteus, Marchantia polymorpha (liverwort), Nicotiana benthamiana, Panicum miliaceum, Panax ginseng, Panicum maximum, Pinus strobus, Physcomitrella patens, Synechococcus sp, PCC 7942, Paulinella chromatophora (amoeba), Prochlorococcus sp, (surface and deep water ecotype), Spirodela polyrhiza, Symbiodinium sp., Zea mays</i>  |
| <b>Predicted reactivity</b>   | Algae (brown and red), <i>Brassica napus</i> , Conifers, Cyanobacteria, Dictos, <i>Cannabis sativa</i> , <i>Galdieria sulphuraria</i> , <i>Lactuca sativa</i> , <i>Lycopersicon esculentum</i> , <i>Medicago sativa</i> , <i>Nannochloropsis sp.</i> , <i>Oryza sativa</i> , <i>Ostreococcus sp.</i> , <i>Pisum sativum</i> , <i>Porphyridium purpureum</i> , <i>Sesamum indicum</i> , <i>Thalassiosira pseudonana</i> , <i>Zostera marina</i> , <i>Vitis vinifera</i> cellular [compartment marker] of thylakoid membrane   |
|                               | Species of your interest not listed? <a href="#">Contact us</a>  |
| <b>Not reactive in</b>        | No confirmed exceptions from predicted reactivity are currently known,   |
| <b>Additional information</b> | The antibody is appropriate for detecting both, 24 kDa or the 10 kDa C-terminal fragments, whichever is generated under given treatment conditions. In our analysis we have seen both, ca. 24 kDa and ca. 10 kDa fragments from different samples, depending on treatments and isolation procedures. Rabbit anti-PsbA antibody can detect more than one band of PsbA protein, e.g. precursor and mature protein as compare to the hen anti-PsbA antibodies AS01 016. This antibody will detect the phosphorylated form of D1 as an alternate band to the main band on a high resolution gel. The antibody will bind to cross-linked proteins: D1/D2, D1/cyt b559, D1/CP43, |
| <b>Selected references</b>    | To be added when available. Antibody released in May 2023.   |