Agrisera
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This product is **for research use only** (not for diagnostic or therapeutic use) **contact: support@agrisera.com**

Agrisera AB | Box 57 | SE-91121 Vännäs | Sweden | +46 (0)935 33 000 | www.agrisera.com

Product no AS09 146S

PsbD | D2 protein of PSII positive control/quantitation standard

Product information

Format	Lyophilized in glycerol
Quantity	250 µl
Reconstitution	For reconstitution add 225 µl of sterile water, Please notice that this product contains 10% glycerol and might appear as liquid but is provided lyophilized
Storage	Store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles. Please remember to spin the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.
Additional information	The PsbD protein standard can be used in combination with global anti-PsbD antibodies to quantitate PsbD from a wide range of species. Global antibodies are raised against highly conserved amino acid sequences in the PsbD protein. Quantitative western blot: detailed method description, video tutorial

Application information

Recommended dilution	Standard curve: 3 loads are recommended (0.5, 2 and 4 µl). For most applications a sample load of 0.2 µg of chlorophyll will give a PsbD signal in this range. Positive control: a 2 µl load per well is optimal for most chemiluminescent detection systems. This standard **is stabilized and ready** and does not require heating before loading on the gel. Please note that this product contains 10% glycerol and might appear as liquid but is provided lyophilized. Allow the product several minutes to solubilize after adding water. Mix thoroughly but gently Take extra care to mix thoroughly before each use, as the proteins tend to settle with the more dense layer after freezing.
Expected | apparent MW	In most gel systems PsbD migrates around 28-30 kDa
Additional information	**Concentration:** after adding 225 µl of milliQ water final concentration of the standard is 0.25 pmoles/ul **Protein standard buffer composition**: Glycerol 10%, Tris Base 141 mM, Tris HCl 106 mM, LDS 2%, EDTA 0.51 mM, SERVA® Blue G250 0.22 mM, Phenol Red 0.175 mM, pH 8.5, 0.1 mg/ml PefaBloc protease inhibitor (Roche), 50 mM DTT. **This standard is ready-to-load and does not require any additions or heating. It needs to be fully thawed and thoroughly mixed prior to using. Avoid vigorous vortexing, as buffers contain detergent. Following mixing, briefly pulse in a microcentrifuge to collect material from cap.** **This standard is stabilized and ready and does not require heating before loading on the gel.** **Please note that this product contains 10% glycerol and might appear as liquid but is provided lyophilized. Allow the product several minutes to solubilize after adding water. Mix thoroughly but gently Take extra care to mix thoroughly before each use, as the proteins tend to settle with the more dense layer after freezing.**
Selected references	Partensky et al. (2018). Comparison of photosynthetic performances of marine picocyanobacteria with different configurations of the oxygen-evolving complex. Photosynth Res. 2018 Jun 25. doi: 10.1007/s11120-018-0539-3. Li et al. (2016). A Hard Day's Night: Diatoms Continue Recycling Photosystem II in the Dark. Front. Mar. Sci., 08 November 2016 Li et al. (2014). The nitrogen costs of photosynthesis in a diatom under current and future pCO2. New Phytol. 2014 Sep 25. doi: 10.1111/nph.13037.