

Product no **AS06 119****Cyt f | Cytochrome f protein (PetA) of thylakoid Cyt b6/f-complex (algal)****Product information**

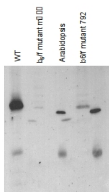
Immunogen	GST fusion to cytochrome f from <i>Chlamydomonas reinhardtii</i> P23577
Host	Rabbit
Clonality	Polyclonal
Purity	Serum
Format	Lyophilized
Quantity	50 µl
Reconstitution	For reconstitution add 50 µl of sterile water
Storage	Store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles. Please remember to spin 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	Contains 0.02 % sodium azide as preservative

Application information

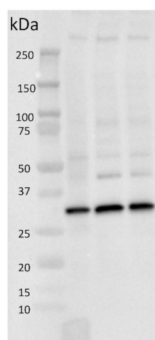
Recommended dilution	1 : 2000-1 : 50 000 (WB)
Expected apparent MW	34 31-32 kDa
Confirmed reactivity	<i>Arabidopsis thaliana</i> , <i>Chlamydomonas reinhardtii</i> , <i>Chlorella vulgaris</i> , <i>Colobanthus quitensis</i> Kunt Bartl, <i>CRaterostigma pumilum</i> , <i>Hordeum vulgare</i> , <i>Nannochloropsis gaditana</i> , <i>Nicotiana tabacum</i> , <i>Nostoc</i> sp. PCC7120, <i>Physcomitrium patens</i> , <i>Selaginella martensi</i> , <i>Synechocystis</i> sp. 6803 substrain PCC-M, <i>Ulva prolifera</i>
Predicted reactivity	Algae, <i>Citrus x limon</i> , <i>Zea mays</i> Species of your interest not listed? Contact us
Additional information	Reaction with cyanobacteria: <i>Synechocystis</i> 6803 and <i>Synechococcus</i> 7942 possible to obtain on total cell extract when using antibody at 1: 500 and longer exposure time.
Selected references	Redekop et al. (2020). PsbS Contributes to Photoprotection in Chlamydomonas Reinhardtii Independently of Energy Dissipation. <i>Biochim Biophys Acta Bioenerg.</i> 2020 Jun 1;1861(5-6):148183. doi: 10.1016 Liu et al. (2020). Acid treatment combined with high light leads to increased removal efficiency of Ulva prolifera. <i>Algal Research</i> , Volume 45, January 2020, 101745 Storti et al. (2020). The activity of chloroplast NADH dehydrogenase-like complex influences the photosynthetic activity of the moss Physcomitrella patens. doi.org/10.1101/2020.01.29.924597 Koh et al. (2019). Heterologous synthesis of chlorophyll a b in Nannochloropsis salina enhances growth and lipid production by increasing photosynthetic efficiency. <i>Biotechnol Biofuels.</i> 2019 May 14;12:122. doi: 10.1186/s13068-019-1462-3. eCollection 2019. Dall'Osto et al. (2019). Combined resistance to oxidative stress and reduced antenna size enhance light-to-biomass conversion efficiency in Chlorella vulgaris cultures. <i>Biotechnol Biofuels.</i> 2019 Sep 16;12:221. doi: 10.1186/s13068-019-1566-9. Fristedt et al. (2015). The thylakoid membrane protein CGL160 supports CF1CF0 ATP synthase accumulation in Arabidopsis thaliana. <i>PLoS One.</i> 2015 Apr 2;10(4):e0121658. doi: 10.1371/journal.pone.0121658. Storti et al. (2018). Role of cyclic and pseudo-cyclic electron transport in response to dynamic light changes in Physcomitrella patens. <i>Plant Cell Environ.</i> 2018 Nov 29. doi: 10.1111/pce.13493. Kong et al. (2018) Interorganelle Communication: Peroxisomal MALATE DEHYDROGENASE2 Connects Lipid Catabolism to Photosynthesis through Redox Coupling in Chlamydomonas. <i>Plant Cell.</i> 2018 Aug;30(8):1824-1847. doi: 10.1105/tpc.18.00361 Jokei et al. (2018). Hunting the main player enabling Chlamydomonas reinhardtii growth under fluctuating light. <i>Plant J.</i> 2018 Mar 25. doi: 10.1111/tpj.13897. Du et al. (2018). Galactoglycerolipid Lipase PGD1 Is Involved in Thylakoid Membrane Remodeling in Response to Adverse Environmental Conditions in Chlamydomonas. <i>Plant Cell.</i> 2018 Feb;30(2):447-465. doi: 10.1105/tpc.17.00446. Schöttler et al. (2017). The plastid-encoded Psal subunit stabilizes photosystem I during leaf senescence in tobacco. <i>J Exp Bot.</i> 2017 Feb 1;68(5):1137-1155. doi: 10.1093/jxb/erx009. Zou et al. (2017). An Animal-Like Cryptochrome Controls the Chlamydomonas Sexual Cycle. <i>Plant Physiol.</i> 2017 Jul;174(3):1334-1347. doi: 10.1104/pp.17.00493. Georg et al. (2017). Acclimation of Oxygenic Photosynthesis to Iron Starvation Is Controlled by the sRNA IsaR1. <i>Curr Biol.</i> 2017 May 22;27(10):1425-1436.e7. doi: 10.1016/j.cub.2017.04.010. (Synechocystis PCC6803) Tyuereva et al. (2017). The absence of chlorophyll b affects lateral mobility of photosynthetic complexes and lipids in grana membranes of Arabidopsis and barley chlorina mutants. <i>Photosynth Res.</i> 2017 Apr 5. doi: 10.1007/s11120-017-0376-9. (Hordeum vulgare, western blot)

- [Ferroni et al. \(2016\)](#). Light acclimation in the lycophyte *Selaginella martensii* depends on changes in the amount of photosystems and on the flexibility of the light-harvesting complex II antenna association with both photosystems. *New Phytol.* 2016 Apr 5. doi: 10.1111/nph.13939.
- [Suorsa et al. \(2015\)](#). Light acclimation involves dynamic re-organisation of the pigment-protein megacomplexes in non-appressed thylakoid domains. *Plant J.* 2015 Aug 29. doi: 10.1111/tpj.13004.
- [Charuvi et al. \(2015\)](#). Photoprotection Conferred by Changes in Photosynthetic Protein Levels and Organization during Dehydration of a Homiochlorophyllous Resurrection Plant. *Plant Physiol.* 2015 Apr;167(4):1554-65. doi: 10.1104/pp.114.255794.
- [Hojka et al. \(2014\)](#). Inducible repression of nuclear-encoded subunits of the cytochrome b6f complex in tobacco reveals an extraordinarily long lifetime of the complex. *Plant Physiol.* 2014 Jun 24. pii: pp.114.243741.
- [Dang et al. \(2014\)](#). Combined Increases in Mitochondrial Cooperation and Oxygen Photoreduction Compensate for Deficiency in Cyclic Electron Flow in *Chlamydomonas reinhardtii*. *Plant Cell.* 2014 Jul 2. pii: tpc.114.126375.
- [Lang et al. \(2011\)](#). Simultaneous isolation of pure and intact chloroplasts and mitochondria from moss as the basis for sub-cellular proteomics. *Plant Cell Rep.* 2011 Feb;30(2):205-15. doi: 10.1007/s00299-010-0935-4.

Application example



Chlamydomonas reinhardtii samples are lysed cells, *Arabidopsis thaliana* samples are prepared from thylakoid membranes; Samples were boiled 1 min in 3%SDS, then 10ug of chlorophylls were loaded in each well of a 12% acrylamide gel.



15 µg protein of whole cell extracts precipitated with 80 % acetone followed by re-suspension in 100 mM Tris HCl pH 6.8, 4 % SDS, 20 mM EDTA of *Chlamydomonas reinhardtii* were loaded on BioRad 4-20% Criterion TGX Precast Mini protein gels. Gels were run at 85V. For electro-blotting wet transfer onto nitrocellulose membrane was performed (105 V for 1h). Overnight blocking with 5% milk in TBS-T in the cold room. Two-hour-long incubation with anti-cyt f antibodies at a dilution of 1:50 000 in TBS-T was followed by washes and incubation with matching anti-rabbit secondary antibodies and development with chemiluminescent detection reagent following manufacture's recommendations. Image was taken using Chemidoc MP Imaging system. Exposure time was in a range of 3 to 10 seconds.

Courtesy of Dr. Angeliki Tsihla, Petroutsos lab, CEA Grenoble, France