Agrisera
Part of Thermo Fisher Scientific

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 AS14 2819

Anti-LHCSR1

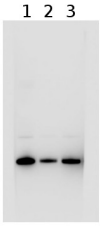
Product information

Immunogen	KLH-conjugated synthetic peptide derived from LHCSR1 protein sequence from *Chlamydomonas reinhardtii,* UniProt: P93664
Host	Rabbit
Clonality	Polyclonal
Purity	Immunogen affinity purified serum in PBS pH 7.4.
Format	Lyophilized
Quantity	50 µg
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.

Application information

Recommended dilution	1 : 1000 (WB)
Expected | apparent MW	27 kDa
Confirmed reactivity	*Bryopsis corticulans, Chlamydomonas reinhardtii, Nannochloropsis gaditana*
Predicted reactivity	Species of your interest not listed? Contact us
Not reactive in	*Lobosphaera incisa, Phaeodactylum tricornutum*
Additional information	This antibody is also recognizing recombinant LHCSR1 overexpressed in *E.coli* as described in Perozeni et al. (2020).
Selected references	Dannay et al. (2025). Photoreceptor-induced LHL4 protects the photosystem II monomer in Chlamydomonas reinhardtii. Proc Natl Acad Sci U S A. 2025 Feb. 18;122(7):e2418687122. doi: 10.1073/pnas.2418687122. McQuilian et al. (2023). Proteomic characterization of a lutein-hyperaccumulating Chlamydomonas reinhardtii mutant reveals photoprotection-related factors as targets for increasing cellular carotenoid content. Biotechnol Biofuels Bioprod . 2023 Nov 4;16(1):166. doi: 10.1186/s13068-023-02421-0. Cazzaniga et al. (2022). Engineering astaxanthin accumulation reduces photoinhibition and increases biomass productivity under high light in Chlamydomonas reinhardtii. Biotechnol Biofuels Bioprod. 2022 Jul 11;15(1):77. doi: 10.1186/s13068-022-02173-3. PMID: 35820961; PMCID: PMC9277849. Redekop et al. (2020). PsbS Contributes to Photoprotection in Chlamydomonas Reinhardtii Independently of Energy Dissipation . Biochim Biophys Acta Bioenerg . 2020 Jun 1;1861(5-6):148183.doi: 10.1016 Lammermann et al. (2020). Ubiquitin ligase component LRS1 and transcription factor CrHy5 act as a light switch for photoprotection in Chlamydomonas. doi.org/10.1101/2020.02.10.942334 bioRxiv Roach et al. (2020). The non-photochemical quenching protein LHCSR3 prevents oxygen-dependent photoinhibition in Chlamydomonas reinhardtii. J Exp Bot. 2020 Jan 16. pii: eraa022. doi: 10.1093/jxb/eraa022. Gabilly et al. (2019). Regulation of photoprotection gene expression in Chlamydomonas by a putative E3 ubiquitin ligase complex and a homolog of CONSTANS. Proc Natl Acad Sci U S A. 2019 Aug 12. pii: 201821689. doi: 10.1073/pnas.1821689116.

Application example



10 ug of a total cell extract of *Chlamydomonas reinhardtii*: WT _P _HL_High CO2 **(1)**, WT_P_HL **(2)**, Npq4_P _HL **(3)**, were separated on Bolt® 4-12% Bis-Tris Plus Gels (precast) and blotted to PVDF using Bolt® transfer system for 1h . Blots were blocked with 5% BSA/milk for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 1 000 for 1h at RT with agitation. The antibody

Agrisera
Part of Thermo Fisher Scientific

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

solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and
3 times for 5 min in PBS-T at RT with agitation. Blot was incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, AS09 602, Agrisera) diluted to 1:10 000 in for 1h at RT with
agitation. The blot was washed as above and developed for 5 min with ECL according to the manufacturer's instructions. Exposure time was 10 seconds.
P: photoautotrophically grown cells
HL: High light illumination(light intensity:500 µE)

Courtesy Dr. Roberta Croce, Biophysics of Photosynthesis Dep. Physics and Astronomy Faculty of Sciences VU University Amsterdam, The Netherlands