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

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Product no AS03 037A

RbcL | Rubisco large subunit, form I (affinity purified)

Product information

Immunogen	KLH-conjugated synthetic peptide conserved across all known plant, algal and (cyano)bacterial RbcL protein sequences (form I L8S8 and form II L2), including *Arabidopsis thaliana* O03042, *Hordeum vulgare* P05698, *Oryza sativa* P0C510, *Chlamydomonas reinhardtii* P00877, *Synechococcus* PCC 7920 A5CKC5
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.
Additional information	Anti-RbcL can be used as a cellular [compartment marker] of plastid stroma (cytoplasm in cyanobacteria) and detects RbcL protein from 31.25 fmoles. As both forms (I and II) are detected it is suitable for work with samples from Dinoflagellates, Haptophytes and Ochrophytes (diatoms, Raphidophytes, brown algae) as well as higher plants. This antibody together with Agrisera Rubisco protein standard is very suitable to quantify Rubisco in plant and algal samples. This product can be sold containing ProClin if requested.

Application information

Recommended dilution	1 : 5000-10 000 (WB)
Expected | apparent MW	52.7 kDa (*Arabidopsis thaliana*), 52.5 kDa (cyanobacteria), 52.3 (*Chlamydomonas reinhardtii*)
Confirmed reactivity	*Agostis stolonifera cv. Penncross, Arabidopsis thaliana, Apium graveolens, Artemisia annua, Atrichum undulatum, Attheya longicornis, Baculogypsina sphaerulata (benthic foraminifer), Beta vulgaris, Begonia* sp., *Bienertia sinuspersici, Brassica napus, Kandelia candel, Cannabis sativa* L., *Chaetoceros furcellatus, Chlorococcum dorsiventrale, Colobanthus quitensis, Cicer arietinum, Chenopodium quinoa, Chlamydomonas raudensis, Chlamydomonas reinhardtii, Colobanthus quitensis* Kunt Bartl, *Chlorella sorokiniana, Chlorella vulgaris, Coscinodiscus concinnus, Cyanophora paradoxa, Cylindrospermopsis raciborskii* CS-505, *Cynara cardunculus, Emiliana huxleyi, Euglena gracilis, Ficus carica, Fortunella margarita* Swingle, *Fraxinus mandshurica, Fucus vesiculosus, Gladieria sulphuraria, Glycine max, Gonyaulax polyedra, Guzmania* hybrid, *Heterosigma akashiwo, Hevea, Hordeum vulgare, Hypnum cupressiforme, Jatropha curcas, Karenia brevis* (C.C.Davis) s) G.Hansen & Ø.Moestrup (Wilson isolate), *Kochia prostrata, Lathyrus sativus, Liquidambar formosana, Malus domestica, Medicago truncatula, Micromonas pusila, Nicotiana benthamiana, Nicotiana tabacum, Panicum virgatum, Petunia hybrida* cv. Mitchell, *Phaeodactylum tricornutum, Physcomitrium patens, Pisum sativum, olytrichum formosum, Porosira glacialis,, Porphyra sp., Ricinus communis, Robinia pseudoacacia, Rhytidiadelphus squarrosus, Saccharum* sp., *Schima superba, Skeletonema costatum* (diatom), *Skeletonema marinoi (diatom), Solanum lycopersicum, Spinacia oleracea,* lichens, *Stanleya pinnata, Symbiodinium sp., Synechococcus PCC 7942, Synechococcus elongatus* UTEX 2973, *Rhoeo discolor, Thalassiosira pseudonana, Thermosynechococcus elongatus, Triticum aestivum, Prochlorococcus sp.* (surface and deep water ecotype), *Triticum aestivum,* dinoflagellate endosymbionts (genus Symbiodinium), extreme acidophilic verrucomicrobial methanotroph *Methylacidiphilum fumariolicum* strain SolV, *Thalassiosira punctigera, Tisochrysis lutea, Verbascum lychnitis, Vitis vinifera, Quercus ilex*
Predicted reactivity	Alpha proteobacteria, Algae (brown and red) including *Galdieria sulphuraria*, Dicots, *Benincasa hispida, Kalanchoe fedtschenkoi*; Beta-proteobacteria, Conifers, Cryptomonads, Cyanobacteria (prochlorophytes), Gamma-proeobacteria, Liverworts, *Manihot esculenta*, Marchantia polymorpha, Monocots, Mosses, *Suaeda glauca, Welwitschia; Nannochloropsis* sp., *Picochlorum sp., Porphyridium purpureum, Zea mays, Zosteria marina* For detection in Rhodospirillaceae use product AS15 2955 Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known
Selected references	Cui, Liu, Li, et al. (2022) The cellulose--lignin balance affects the twisted growth of Yunnan pine trunk. Authorea. October 10, 2022. DOI: 10.22541/au.166538021.18232197/v4 He, Buren, Baysal, et al. (2022) Nitrogenase Cofactor Maturase NifB Isolated from Transgenic Rice is Active in FeMo-co Synthesis. ACS Synth Biol. 2022;11(9):3028-3036. doi:10.1021/acssynbio.2c00194

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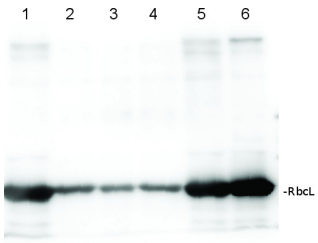
Li et al. (2021). Physiological responses of Skeletonema costatum to the interactions of seawater acidification and the combination of photoperiod and temperature. Biogeosciences, 18, 1439-1449, 2021 https://doi.org/10.5194/bg-18-1439-2021
Lal et al. (2018). The Receptor-like Cytoplasmic Kinase BIK1 Localizes to the Nucleus and Regulates Defense Hormone Expression during Plant Innate Immunity. Cell Host Microbe. 2018 Apr 11;23(4):485-497.e5. doi: 10.1016/j.chom.2018.03.010.
Korotaeva et al. (2018). Effect of Heat Hardening on Expression of Genes phb3 and phb4 and Accumulation of Phb Proteins in Green Leaves of Arabidopsis thaliana. Russian Journal of Plant Physiology, 65(5), 688-696, 2018 https://doi.org/10.1134/s1021443718040039

application example



Total protein from *Populus* T89 were extracted with “KEB buffer”, precipitated with ethanol on ice and denatured with “loading buffer” at 100°C for 10 min, separated on 8% SDS-PAGE and blotted O/N to PVDF using (wet blot) tank transfer. Blots were blocked with 5%TBS milk, for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 1 000 TBS for 2h at RT with agitation. The antibody solution was decanted and the blot was rinsed briefly with TBS-T, then washed for 1h in TBS-T at RT with agitation. Blot was incubated in secondary antibody (goat anti-rabbit IgG HRP-conjugated, from Agrisera, AS09 602) diluted to 1:5000 in TBS-M (milk 5%) for 1h at RT with agitation. The blot was washed as above and developed with chemiluminescent detection reagent, for 10s increment until exposure time of 30s total.

Courtesy Dr. Mark Ruhl, Umeå Plant Science Centre, Sweden