Rubisco | 557 kDa hexadecamer

Background
Rubisco (Ribulose-1,5-bisphosphate carboxylase/oxygenase) catalyzes the rate-limiting step of CO2 fixation in photosynthetic organisms. It is demonstrably homologous from purple bacteria to flowering plants and consists of two protein subunits, each present in 8 copies. In plants and green algae, the large subunit (~55 kDa) is coded by the chloroplast rbcL gene, and the small subunit (15 kDa) is coded by a family of nuclear rbcS genes.

Immunogen
purified 557 kDa hexadecamer Rubisco protein complex from Spinacia oleracea (SIGMA-ALDRICH R-8000), UniProt: P00875 and Q43832

Host
Rabbit

Clonality
Polyclonal

Purity
Serum

Format
Lyophilized

Quantity
200 µl

Reconstitution
For reconstitution add 200 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 tubes briefly prior to opening them to avoid any losses that might occur from lyophilized material adhering to the cap or sides of the tubes.

Tested applications
Immunolocalization (IL), Western blot (WB)

Related products
AS03 037 | Anti-RbcL | Rubisco large subunit, form I and form II (50 µl), (serum), rabbit antibodies
AS03 037A | Anti-RbcL | Rubisco large subunit, form I and form II (50 µg affinity purified), rabbit antibodies
AS03 037-HRP | Anti-RbcL | Rubisco large subunit, form I and form II (40 µg, HRP-conjugated), rabbit antibodies
AS15 2955 | Anti-RbcL II | Rubisco large subunit, form II (50 µl), rabbit antibodies
AS15 2955S | RbcL II | Rubisco form II positive control/quantitation standard
AS01 017 | anti-RbcL | Rubisco large subunit, form I, chicken antibody
AS01 017S | Rubisco protein standard for quantitative western blot or positive control
AS03 037PRE | Rubisco large subunit, pre-immune serum
AS09 409 | Rubisco quantitation kit
AS15 299d | Rubisco ELISA quantitation kit
AS07 259 | anti-RbcS | Rubisco small subunit (SSU), rabbit antibodies

Complete Collection of antibodies to Rubisco

Application information

Recommended dilution
1 : 10 000-1 : 20 000 on 0.5-10 ug total cellular protein/lane and standard (WB). 1 : 500-1:1000 (IL)

Expected | apparent MW
53-55 | 53-55 kDa

Confirmed reactivity
Arabidopsis thaliana, Aucuba japonica, Chlamydomonas reinhardtii, Fremyella diplosiphon, Glycine max, Hordeum vulgare, Manihot esculenta Crantz, Physcomitrella patens, Pismum sativum, Populus sp., Salsola laricifolia, Solanum tuberosum, Spinacia oleracea, Synechocystis sp. PCC 6803, Synechococcus sp. PCC7942, Zea mays

Predicted reactivity
Begonia sp., Daucus carota

Not reactive in
No confirmed exceptions from predicted reactivity are currently known.
RbcS subunit is not detected by this antibody

This product can be sold containing proclin if requested

Selected references


Application example

0.5 µg of total leaf protein isolated with Agrisera Protein Extraction Buffer (AS08 300) from Arabidopsis hylana (1), Spinacia oleracea (2), Zea mays (3), Hordeum vulgare (4), Solanum tuberosum (5), Pisum sativum (6) were separated on 4-12% NuPage (Invitrogen) LDS-PAGE and blotted 45 min (30V) to nitrocellulose. Filters where blocked 1h with 2% low-fat milk powder in TBS-T (0.1% TWEEN 20) and probed with AS07 218 (1:20 000, 1 h) and secondary anti-rabbit (1:20000, 1 h) antibody (HRP conjugated) in TBS-T containing 2% low fat milk powder. Antibody incubations where followed by washings in TBS-T (15, +5, +5, +5 min). All steps were performed at RT with agitation. Signal was detected with chemiluminescence using a Fuji LAS-3000 CCD (300s, high sensitivity).