**Background**

Rubisco catalyzes the rate-limiting step of CO₂ fixation in photosynthesis. This enzyme contains two subunits, each present in eight copies. In plants and green algae, 55-kD large subunit is coded by the chloroplast rbcL gene, and the 15-kD small subunit is coded by a family of nuclear RbcS genes.

**Immunogen**

KLH-conjugated synthetic peptide derived from all known sequences of RbcS from monocots and dicots including RuBisCO small subunit 1A UniProt: P10795, TAIR: AT1G67090, and 1B of Arabidopsis thaliana UniProt: P10796 At5g39430

**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 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**

Western blot (WB)

**Related products**

- AS07 259A | anti-RbcS | Rubisco small subunit (SSU) (affinity purified) rabbit antibodies
- AS03 037 | anti-RbcL | Rubisco large subunit, form I and form II (50 µl), 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 2995S | anti-RbcL II | Rubisco form II positive control/quantitation standard
- AS01 017 | anti-RbcL | Rubisco large subunit, form I, chicken antibodies
- 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 2994 | Rubisco ELISA quantitation kit
- AS07 218 | anti-Rubisco | 557 kDa hexadecamer, rabbit antibody to a whole protein
- AS07 222 | anti-RbcS | Rubisco small subunit (SSU) from pea, rabbit antibodies
- matching secondary antibody

**Application information**

**Recommended dilution**

1 : 5000 (WB)

**Expected apparent MW**

20 | 15 kDa

**Confirmed reactivity**

Arabidopsis thaliana, Chlamydomonas reinhardtii, Cucumis sativus, Hordeum vulgare, Malus domestica, Nicotiana tabacum

**Predicted reactivity**

Algae, Camellia oleifera, Erythranthe guttata, Flaveria bidentis, Flaveria sonorensis, Glycine max, L, Marchantia paleacea, Musa acuminata, Nicotiana benthamiana, Oryza sativa, Petunia hybrida, Polianthes tuberosa, Populus
Selected references


Application example

2 µg of total protein from *Arabidopsis thaliana* (1), *Hordeum vulgare* (2), extracted with Agrisera PEB extraction buffer (AS08 300) Samples were diluted with 1X sample buffer (NuPAGE LDS sample buffer (Invitrogen) supplemented with 50 mM DTT and heat at 70°C for 5 min and kept on ice before loading. Protein samples were separated on 4-12% Bolt Plus gels. LDS-PAGE and blotted for 70 minutes to PVDF using tank transfer. Blots were blocked immediately following transfer in 2% blocking reagent (GE RPN 2125; Healthcare) or 5% non-fat milk dissolved in 20 mM Tris, 137 mM sodium chloride pH 7.6 with 0.1% (v/v) Tween-20 (TBS-T) for 1h at room temperature with agitation. Blots were incubated in the primary antibody at a dilution of 1: 10 000 (in blocking reagent) for 1h at room temperature with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, and then washed 1x15 min and 3x5 min with TBS-T at room temperature with agitation. Blots were incubated in secondary antibody (goat anti-rabbit IgG horse radish peroxidase conjugated, recommended secondary antibody AS09 602, Agrisera) diluted to 1:25 000 in blocking reagent for 1h at room temperature with agitation. The blots were washed as above. The blot was developed for 5 min with TMA-6 (Lumigen) detection reagent according the manufacturers instructions. Images of the blots were obtained using a CCD imager (VersaDoc MP 4000) and Quantity One software (Bio-Rad). Exposure time was 25 seconds.

Courtesy of Mayura Manerkar, Mount Alison University, Canada