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Product Information

Anti-RuBisCO, RbcL

Developed in Chicken
Affinity Isolated IgY

Product Number **R4404**

Product Description

Anti-RuBisCO, Large Subunit (RbcL) is developed in chicken using a synthetic peptide conjugated to KLH as immunogen. The antibody is purified from yolk with a final affinity-purification using the immunizing peptide immobilized on agarose.

Anti-RuBisCO recognizes an epitope located on the exterior of the large subunit near the area of large and small subunit interaction. It cross-reacts with both monocotyledons and dicotyledons. The antibody has been tested against *Arabidopsis thaliana*, cotton, *Glycine max* (soybean), maize, pine, rice, tobacco and tomato. The antibody recognizes RbcL by immunoblotting (56 kDa). The antibody may also be used in ELISA.

Ribulose biphosphate carboxylase-oxygenase (RuBisCO) is the most abundant protein on earth and in green plant tissue. It is also one of the most highly conserved proteins across monocotyledons and dicotyledons. RuBisCO is the enzyme responsible for the photosynthetic reduction of carbon. It is a relatively large enzyme, constituting 30–50% of the soluble protein of plants. The enzyme is a complex composed of two polypeptide complexes of four large (RbcL approximately 56 kd) and four small (RbcS approximately 12 kd) subunits resulting in a total of eight large and eight small polypeptide subunits with a native molecular mass greater than 520 kDa. The catalytic site is present on the large subunit, but catalytic competency requires the presence of the small subunit.

Reagent

Anti-RuBisCO is supplied as a solution in 0.01 M phosphate buffered saline (PBS), pH 7.4, containing 1% bovine serum albumin (BSA) and 15 mM sodium azide. Antibody concentration is ~1 mg/ml.

Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing is not recommended. Storage in “frost-free” freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

In immunoblotting, a 1:10,000 dilution of antibody detects at least 12 ng of RbcL protein. The antibody detects RbcL in whole plant cell tissue extract of both monocotyledon and dicotyledons by immunoblotting. RbcL from *Arabidopsis thaliana*, cotton, *Glycine max* (soybean), maize, pine, rice, tobacco and tomato is observed as a single predominant band by immunoblot.

Note: In order to obtain the best results in various techniques and preparation, we recommend determining the optimal working concentration by titration.

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