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product AS08 306
Cyt f | Cytochrome f protein (PetA) of thylakoid Cyt b6/f-complex (higher plants)

product information

Background
Multi-subunit complex of cytb6/f is a crucial component for the photosynthetic electron transport chain of higher plants, green algae and cyanobacteria. This complex is catalyzing oxidation of quinols and the reduction of the reduction of plastocyanin. This reaction allows to establish the proton force required for the ATP synthesis. Four major subunits build the complex: the petA gene product corresponding to a c-type cytochrome (cytf), the petB gene product corresponding to a b-type/c'-type cytochrome with three haems (cyt b6), the petD gene product (subunit IV, or suIV), and the petC gene product, corresponding to the Rieske/Iron/sulfur protein.

Immunogen
maize cytochrome f purified from chloroplasts, including a final gel purification on a denaturing gel. protein used to elicit this antibody is conserved in Arabidopsis thaliana cyt f UniProt: P56771, TAIR: AtCg00540

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
Immunogold (IG), Western blot (WB)

Related products
AS06 119 | Anti-cytochrome f (PetA), rabbit antibodies
AS18 4169 | Anti-Cyt b6 / PetB | Thylakoid membrane cytochrome b6 protein, N terminal, rabbit antibodies
AS08 330 | Anti-PetC | Rieske iron-sulfur protein of Cyt b6/f complex, rabbit antibodies

Additional information
Can be sold containing 0.1% ProClin

Application information

Recommended dilution
1 : 120 (IG), 1 : 2500-1 : 5000 (WB)

Expected | apparent MW
31-32 kDa

Confirmed reactivity
Arabidopsis thaliana, Echinochaia crus-galli, Hordeum vulgare, Nicotiana tabacum, Panicum miliiaceum, Picea abies, Pisum sativum, Thermosynechococcus elongatus, Solanum lycopersicum, Zea mays

Predicted reactivity
Brachypodium distachyon, Cannabis sativa, Cucumis melo, Oryza sativa, Populus trichocarpa, Solanum tuberosum, Sorghum bicolor, Triticum aestivum

Not reactive in
No confirmed exceptions from predicted reactivity are currently known.

Selected references
Application example

1.0 µg of chlorophyll from pea (C3 plant) and from mesophyll (M) and bundle sheath (BS) thylakoids of various treatments of *Zea mays*, *Echinochloa crus-galli*, *Panicum miliaceum* (C4 plants) extracted with 0.4 M sorbitol, 50 mM Hepes NaOH, pH 7.8, 10 mM NaCl, 5 mM MgCl2 and 2 mM EDTA. Samples were denatured with Laemmli buffer at 75 ⁰C for 5 min and were separated on 12% SDS-PAGE and blotted 30 min to PVDF using wet transfer. Blot was blocked with 5% milk in TBS for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1:3000 overnight at 40C with agitation in 1% milk in TBS-T. The antibody solution was decanted and the blot was washed 4 times for 5 min in TBS-T at RT with agitation. Blot was incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, from Agrisera, AS09 602, Lot 1711) diluted to 1:25 000 in 1% milk in TBS-T for 1h at RT with agitation. The blot was washed 5 times for 5 min in TBS-T and 2 times for 5 min in TBS, and developed for 1 min with 1.25 mM luminol, 0.198 mM coumaric acid and 0.009% H2O2 in 0.1 M Tris-HCl, pH 8.5. Exposure time in ChemiDoc System was 125 seconds.

Courtesy of Dr. Wioleta Wasilewska-Dębowska, Warsaw University, Poland