

product **AS09 591**

AtpH | ATP synthase subunit c

product information

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| background | F-type ATPase (ATP synthase) is the universal enzyme that synthesizes ATP from ADP and phosphate using the energy stored in a transmembrane ion gradient. Multiple copies of the c subunit build up the ring structure (in spinach a 14-mer of ~112 kDa) of the membrane bound Fo-part of the enzyme. |
| immunogen | <u>KLH</u> -conjugated peptides derived from AtpH subunit c of <i>Arabidopsis thaliana</i> <u>P56760</u> and <i>Chlamydomonas reinhardtii</i> <u>Q37304</u> |
| antibody format | rabbit; polyclonal; serum; lyophilized |
| quantity | 100 µl - for reconstitution add 100 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) |
| additional information | to be added when available |

application information

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| recommended dilution | 1: 10 000 with standard ECL (WB) |
| expected apparent MW | 8 kDa (for <i>Arabidopsis thaliana</i>) |
| confirmed reactivity | <i>Arabidopsis thaliana</i> , <i>Chlamydomonas reinhardtii</i> |
| predicted reactivity | dicots including <i>Glycine max</i> , <i>Pisum sativum</i> , <i>Vitis vinifera</i> , monocots including: <i>Hordeum vulgare</i> , <i>Oryza sativa</i> , <i>Zea mays</i> , trees: <i>Populus alba</i> , <i>Pinus thunbergii</i> , moss: <i>Physcomitrella patens</i> , green algae, <i>Ostreococcus tauri</i> |
| not reactive in | no confirmed exceptions from predicted reactivity known in the moment |
| additional information | please note that increased incubation at 95°C (20-30 min) prior to loading is recommended to break the multimeric c-mer structure, detection of partial ring structures (e.g. 5 or 6 subunits) may occur |
| selected references | to be added when available |

application example

10 µg of chlorophyll/well of *Chlamydomonas reinhardtii* total cell extract (1), *Chlamydomonas reinhardtii* subunit gamma deletion mutant thylakoid membrane fraction (2), *Arabidopsis thaliana* thylakoid membrane fraction (3), *Chlamydomonas reinhardtii* thylakoid membrane preparation (4) were separated on 12-18% acrylamide-8M urea gel and blotted to nitrocellulose membrane. Filters were blocked 1 h with 5% dry milk in 1 x PBS and probed with anti-ATP synthase subunit c antibody (AS09 591, 1: 10 000, 1h) and secondary HRP-conjugated anti-rabbit antibody (1: 10 000, 1 h) in 1 x PBS containing 5% dry milk. All steps were performed at RT with agitation. Signal was detected with standard ECL (GE Healthcare), exposure time 30".

Arabidopsis membrane preparation has been done according to [Lezhneva et al. \(2008\)](#) A novel pathway of cytochrome c biogenesis is involved in the assembly of the cytochrome b6f complex in *Arabidopsis* chloroplasts. *J Biol. Chem.*, 283:24608-24616 and *Chlamydomonas* membranes were prepared according to [Chua & Bennoun \(1975\)](#) Thylakoid membrane polypeptides of *Chlamydomonas reinhardtii*: wild-type and mutant strains deficient in photosystem II reaction center. *PNAS* 72:2175-2179

Courtesy Dr. Yves Choquet

