Product no AS12 1850
UCP | Uncoupling protein

Product information

<table>
<thead>
<tr>
<th>Immunogen</th>
<th>KLH-conjugated synthetic peptide derived from known UCP protein sequences, including UCP1 (AT3G54110) and UCP2 (AT5G58970) of Arabidopsis thaliana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Clonality</td>
<td>Polyclonal</td>
</tr>
<tr>
<td>Purity</td>
<td>Immunogen affinity purified serum in PBS pH 7.4.</td>
</tr>
<tr>
<td>Format</td>
<td>Lyophilized</td>
</tr>
<tr>
<td>Quantity</td>
<td>100 µg</td>
</tr>
<tr>
<td>Reconstitution</td>
<td>For reconstitution add 100 µl of sterile water</td>
</tr>
<tr>
<td>Storage</td>
<td>Store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles. Please remember to spin the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.</td>
</tr>
</tbody>
</table>

Additional information

Peptide used to elicit this antibody is conserved in both isoforms, UCP1 and UCP2 of Arabidopsis thaliana.

Application information

Recommended dilution
1: 200 (IL), 1 : 2000 (WB)

Expected | apparent
MW | 32 kDa

Confirmed reactivity
Arabidopsis thaliana, Splanum lycopersicum, Triticum aestivum, Vicia faba (protoplasts)

Predicted reactivity
Citrus sinensis, Dracunulus vulgaris, Glycine max, Litchi chinensis, Medicago tribuloides, Nannochloropsis gaditana, Nicotiana tabacum, Oryza sativa, Populus trichocarpa, Ricinus communis, Saccharum officinarum (sugarcane), Triticum aestivum

Species of your interest not listed? Contact us

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

Selected references


Application example

1/2
25 µg (1) or 50 µg (2) of mitochondria, isolated from 14-day old Col-0 plants (Arabidopsis thaliana) grown in hydroponic cultures, were separated on a 12.5% acrylamide-SDS-PAGE. The unstained peqGOLD low molecular weight (LMW) protein marker was used as a molecular weight standard. The gel was subsequently incubated in transfer buffer (40 mM glycine, 100 mM Tris, 0.375 % (w/v) SDS, pH 8.9-9) for 30 minutes at room temperature. Semidry western blotting was performed with 3 layers of whatman paper soaked in transfer buffer and blotted at 0.8 mA/ cm² gel for one hour at room temperature. Blocking was performed for one hour in TBS-T (150 mM NaCl, 10 mM Tris pH 7.4, 0.1 % (v/v) Tween-20) with the addition of 3 % (w/v) non-fat milk at room temperature. Primary antibody (1:2000 dilution) incubation was performed at 4°C/ON in the presence of 1 % (w/v) non-fat milk in TBS-T. Secondary antibody goat anti-rabbit HRP conjugated (AS09 602 Agrisera), at 1:10 000 dilution) was incubated 1h/RT in TBS-T. Chemiluminescence was detected using a 1:1 ratio mixture of ECL 1 (100 mM Tris, 1 % (w/v) luminol, 0.44 % (w/v) coumaric acid, pH 8.5) and ECL 2 (100 mM Tris, 0.18 % (v/v) H₂O₂, pH 8.5) solution and visualized using an Image QuantiLAS4000 image visualizer (GE healthcare). The membrane was exposed for 60 seconds.

UCP was detected at a size of approximately 29 kDa.

Courtesy Dr. Tamara Hechtl, Munich University, Germany

10 µg of mitochondrial fraction from Arabidopsis thaliana and 25 µg of Arabidopsis thaliana leaf extract were separated on 10% gel and blotted on nitrocellulose membrane using wet transfer (0.22% CAPS, pH 11). Filters where blocked (1.5h) in 5% milk in TBST (1X TBS, 0.1% Tween 20), incubated with 1: 5000 anti-UCP antibodies (2h in TBST) followed by incubation with 1: 10 000 secondary anti-rabbit (1h) HRP-coupled antibodies from Agriser, AS09 602 and visualized with standard ECL on Kodak autoradiography film for 15-60 s. Mitochondria were isolated as described by Urantowka et al. (Plant Mol Biol, 2005, 59:239-52). Mitochondrial pellets were suspended in 1X Laemmli buffer (5% beta-mercaptoetanol, 3.7% glycerol, 1.1% SDS, 23 mM Tris- HCl pH 6.8, 0.01% bromophenol blue), heated (95°C, 5 min.) and centrifuged (13 000rpm, 1 min.). Leaf extracts were prepared as described by Martinez-Garcia et al. (Plant J., 1999, 20:251-7).

Courtesy Dr. Janusz Piechota, Wroclaw University, Poland