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**Product no AS11 1797**

# Anti-HPR | Hydroxypyruvate reductase (peroxisomal matrix marker)

## Product information

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| **Immunogen** | KLH-conjugated synthetic peptide derived from known plant HRP sequences, including *Arabidopsis thaliana* UniProt: Q9C9W5,TAIR: At1g68010 |
| **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 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. |

## Application information

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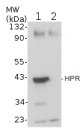
| **Recommended dilution** | 1 : 10 000 (WB) |
| **Expected \| apparent MW** | 43 kDa |
| **Confirmed reactivity** | *Arabidopsis thaliana, Pisum sativum* |
| **Predicted reactivity** | *Chlamydomonas reinhardtii, Chlorella sp. ,Cucumis sativus, Glycine max, Oryza sativa, Populus albaxtremula, Ricinus communis, Volvox*<br>Species of your interest not listed? Contact us |
| **Not reactive in** | *Nicotiana benthamiana, Nicotiana tabacum* |
| **Selected references** | Bapatla et al. (2021). Modulation of Photorespiratory Enzymes by Oxidative and Photo-Oxidative Stress Induced by Menadione in Leaves of Pea (Pisum sativum). Plants 10, no. 5: 987. https://doi.org/10.3390/plants10050987<br>Korotaeva et al. (2018). Effect of Heat Hardening on Expression of Genes phb3 and phb4 and Accumulation of Phb Proteins in Green Leaves of Arabidopsis thaliana. Russian Journal of Plant Physiology, 65(5), 688-696, 2018 https://doi.org/10.1134/s1021443718040039<br>Farmer et al. (2013).Disrupting Autophagy Restores Peroxisome Function to an Arabidopsis lon2 Mutant and Reveals a Role for the LON2 Protease in Peroxisomal Matrix Protein Degradation. Plant Cell, Oct 31. |

## Application example




5-day-old light-grownwild-type (Columbia) **(1)** and *hpr1-1* null mutant (SALK_143584) *Arabidopsis thaliana* seedlings were ground with a pestle in a 1.5 mL tube on dry ice (about 12 seedlings or enough to give ~ 20 µL of tissue), and double volume (~ 40 µL) of NuPAGE 2x loading buffer (Invitrogen) was added. After centrifugation, 20 µL of the supernatant was transferred to a fresh tube with 2.1 µL 0.5 M DTT and boiled at 100 °C for 5 minutes. Samples were loaded onto a NuPAGE 10% Bis-Tris gel (Invitrogen) next to Cruz Markers (Santa Cruz Biotechnology). After electrophoresis, proteins were transferred for 30 minutes at 24 V to a Hybond ECL nitrocellulose membrane (Amersham Pharmacia Biotech) using NuPAGE transfer buffer (Invitrogen). The blot was blocked for 1 h at 4 °C in 8% non-fat dry milk in TBS-T (blocking buffer), and incubated overnight with agitation at 4˚C with primary antibodies, 1:10 000 diluted in blocking buffer. The antibody solution was decanted and the blot was rinsed twice for 5 min each at 4 °C in 8% non-fat dry milk in TBS-T with agitation. The blot was incubated with horseradish peroxidase-conjugated anti-rabbit secondary antibody (Santa Cruz Biotechnology) diluted to 1:5 000 in blocking buffer for 5 h at 4 °C with agitation. The blot was washed three times, for 5 min each, with TBS-T and developed with chemiluminescent detection reagent according to the manufacturer's instructions. Exposure time was 3 seconds.

Courtesy of Sarah Bukhart and Bonnie Bartel, Rice University, USA