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**product AS08 347**

# HSP70 | heat shock protein 70, mitochondrial

## product information

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|---|---|
| **background** | Heat-shock protein 70 (**Hsp70**) is the major stress-inducible protein in vertebrates and is highly conserved throughout evolution. It plays a role as a molecular chaperone and is important for allowing cells to cope with acute stressor insult, especially those affecting the protein machinery. Heat shock cognate protein 70 (HSC70), is a highly conserved protein and a member of the family of molecular chaperones. |
| **immunogen** | KLH-conjugated peptide conserved in higher plant mitochondrial HSC70 including *Arabidopsis thaliana* mtHSC70-1 Q8GUM2 and mtHSC70-2 Q9LDZ0 |
| **antibody format** | rabbit; polyclonal; affinity purified serum in PBS pH 7.4; lyophilized |
| **quantity** | 200 µg - for reconstitution add 200 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: 4000 (WB) |
| **expected \| apparent MW** | 73 \| 70 kDa |
| **confirmed reactivity** | *Arabidopsis thaliana* |
| **predicted reactivity** | dicots including: *Medicago truncatula, Spinacia oleracea, Phaseolus vulgaris, Pisum sativum, Solanum tuberosum, Vitis vinifera*, monoctos including: *Oryza sativa, Triticum aestivum, Zea mays*, trees: *Populus trichocarpa* |
| **not reactive in** | no confirmed exceptions from predicted reactivity known in the moment |
| **additional information** | to be added when available |
| **selected references** | to be added when available, antibody released in October 2009 |

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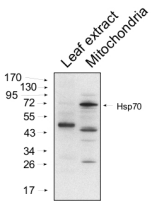
## application example

25 µg of *Arabidopsis thaliana* leaf extract and 15 µg)*Arabidopsis thaliana* mitochondrial fraction 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: 1000 anti-HSP70 mitochondrial antibodies (2h in TBST) followed by incubation with 1: 10 000 secondary anti-rabbit (1h) HRP-coupled antibodies 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, Wrocław University, Poland