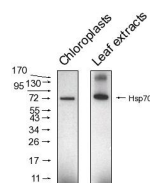


Product no **AS08 348****HSP70 | Heat shock protein 70 (chloroplastic)****Product information**

<b>Immunogen</b>	KLH-conjugated synthetic peptide derived from higher plant chloroplastic HSP70, including <i>Arabidopsis thaliana</i> cpHSC70-1, At4g24280 and cpHSC70-2, At5g49910
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Purity</b>	Serum
<b>Format</b>	Lyophilized
<b>Quantity</b>	200 µl
<b>Reconstitution</b>	For reconstitution add 200 µl of sterile water
<b>Storage</b>	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**

<b>Recommended dilution</b>	1 : 100 (IP), 1 : 2000 (WB)
<b>Expected   apparent MW</b>	76   70 kDa
<b>Confirmed reactivity</b>	<i>Arabidopsis thaliana</i> , <i>Brassica napus</i> , <i>Hordeum spontaneum</i> , <i>Hordeum vulgare</i> , <i>Oryza sativa</i> , <i>Pinus strobus</i> , <i>Pisum sativum</i>
<b>Predicted reactivity</b>	<i>Arundo donax</i> , <i>Brachypodium distachyon</i> , <i>Brassica rapa subsp. pekinensis</i> , <i>Brassica napus</i> , <i>Capsella rubella</i> , <i>Citrus clementina</i> , <i>Citrus sinensis</i> , <i>Coffea canephora</i> , <i>Glycine max</i> , <i>Glycine soja</i> , <i>Hordeum vulgare</i> , <i>Medicago truncatula</i> , <i>Oryza sativa</i> , <i>Phaseolus vulgaris</i> , <i>Physomitrella patensm</i> , <i>Picea sitchensis</i> , <i>Populus trichocarpa</i> , <i>Prunus persica</i> , <i>Ricinus communis</i> , <i>Solanum tuberosum</i> , <i>Solanum lycopersicum</i> , <i>Sorghum bicolor</i> , <i>Spinacia oleracea</i> , <i>Theobroma cacao</i> , <i>Triticum aestivum</i> , <i>Zea mays</i> , <i>Vitis vinifera</i> Species of your interest not listed? <a href="#">Contact us</a>
<b>Not reactive in</b>	No confirmed exceptions from predicted reactivity are currently known
<b>Selected references</b>	<a href="#">Chang et al. (2023)</a> . Chloroplast import motor subunits FtshI1 and FtshI2 are located on opposite sides of the inner envelope membrane. PNAS. 2023 Sep 12;120(37):e2307747120.doi: 10.1073/pnas.2307747120. Epub 2023 Sep 5. <a href="#">Lee et al (2021)</a> . Chaperone-like protein DAY plays critical roles in photomorphogenesis. Nat Commun. 2021 Jul 7;12(1):4194. doi: 10.1038/s41467-021-24446-5. PMID: 34234144; PMCID: PMC8263706. <a href="#">Jeran et al. (2021)</a> The PUB4 E3 Ubiquitin Ligase Is Responsible for the Variegated Phenotype Observed upon Alteration of Chloroplast Protein Homeostasis in Arabidopsis Cotyledons. Genes (Basel). 2021 Sep 6;12(9):1387. doi: 10.3390/genes12091387. PMID: 34573369; PMCID: PMC8464772. <a href="#">Dogra et al. (2019)</a> . Impaired PSII proteostasis triggers an UPR-like response in the var2 mutant of Arabidopsis thaliana. J Exp Bot. 2019 Apr 16. pii: erz151. doi: 10.1093/jxb/erz151. <a href="#">Chen et al. (2018)</a> . TIC236 links the outer and inner membrane translocons of the chloroplast. Nature. 2018 Dec;564(7734):125-129. doi: 10.1038/s41586-018-0713-y. <a href="#">Lentini et al. (2018)</a> . Early responses to cadmium exposure in barley plants: effects on biometric and physiological parameters. Acta Physiol Plant (2018) 40: 178. https://doi.org/10.1007/s11738-018-2752-2.

**Application example**

**Total protein** from *Arabidopsis thaliana* chloroplasts (20 µg) and *Arabidopsis thaliana* leaf extracts (25 µg) were separated on 10% acrilamide gel and electrophoresis prepared according to Schägger and von Jagov (Anl. Biochem., 1987, 166:368-379). After running the gel, proteins were transferred to nitrocellulose membrane using wet transfer (0.22% CAPS, pH 11). Transfer was checked by Ponceau S staining. Blot was

destained by several quick washings in distilled water and 1 washing in 1X TBS (10 mM T pH 7.5, 150 mM NaCl) (10-15 min.). Blot was blocked by 1.5 hour in 5% milk in TBST (1X TBS, 0,1 20) After blocking blot was washed quickly twice in TBST and incubated 2 hours with primary antibody (dilution 1: 2000 TBST (dilution 1:1000). Washing: two quick washings in TBST and 3 x 10 min. washings in TBST. Then blot was incubated 45-60 min. with a secondary anti-rabbit antibodies conjugated to peroxidase (dilution 1:10000) in TBST. Washing: as above. After washing blot was incubated 1-2 min. in ECL solution and exposed to Kodak autoradiography film. Exposure time was 10 seconds.

Courtesy Dr. J. Piechota, Wrocław University, Poland