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contact: support@agrisera.com

Agrisera AB | Box 57 | SE-91121 Vännäs | Sweden | +46 (0)935 33 000 | www.agrisera.com

product **AS07 254**

HSP17.6 | Cytosolic class I heat shock protein 17.6 (rabbit antibody)

product information

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| Background | Hsp17.6 belongs to a family of class I of a small heat shock proteins. They are induced once a plant cells are stressed by an increased temperature. The way small hsp proteins are protecting a living cell are not fully understood. They seem to be involved in chaperone functions by protecting other proteins from irreversible denaturation. Small hsp function also in a late seed maturation process. |
| Immunogen | Recombinant <i>Arabidopsis thaliana</i> Hsp17.6 Cl (class one) P13853 , At1g53540 |
| 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 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) |
| Related products | AS08 284 Anti-HSP17.6 cytosolic class I heat shock protein 17.6, chicken antibodies AS07 255 Anti-HSP17.7 cytosolic class II heat shock protein 17.7, rabbit antibodies collection of antibodies to plant heat shock proteins |

Application information

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| Recommended dilution | 1 : 1000 (WB) |
| Expected apparent MW | 17.6 kDa |
| Confirmed reactivity | <i>Arabidopsis thaliana</i> , <i>Agave tequilana</i> var. <i>Weber</i> , <i>Citrus</i> sp., <i>Cucumis sativus</i> , <i>Iris pumilla</i> (perennial monocot), <i>Pinellia ternata</i> , <i>Pinus sylvestris</i> , <i>Silene vulgaris</i> , <i>Solanum tuberosum</i> , <i>Vicia faba</i> |
| Predicted reactivity | Higher plants, <i>Nicotiana tabacum</i> |
| Not reactive in | No confirmed exceptions from predicted reactivity are currently known. |
| Additional information | There are six total class I genes. Essentially this antibody might react to some extent with all of them. But does not react with class II, organelle, or any other shsp classes. |
| Selected references | McLoughlin et al. (2019) HSP101 Interacts with the Proteasome and Promotes the Clearance of Ubiquitylated Protein Aggregates. <i>Plant Physiol.</i> 2019 Aug;180(4):1829-1847. doi: 10.1104/pp.19.00263 Kato et al. (2019). Induction of the heat shock response in <i>Arabidopsis</i> by chlorinated 1,4-naphthoquinones. <i>Plant Growth Regul</i> (2019). https://doi.org/10.1007/s10725-019-00477-3 . Alamri et al. (2018). Nitric oxide-mediated cross-talk of proline and heat shock proteins induce thermotolerance in <i>Vicia faba</i> L. <i>Environmental and Experimental Botany</i> Available online 23 June 2018. Balfagón et al. (2018). Involvement of ascorbate peroxidase and heat shock proteins on citrus tolerance to combined conditions of drought and high temperatures. <i>Plant Physiol Biochem.</i> 2018 Pantelić et al. (2018). Effects of high temperature on in vitro tuberization and accumulation of stress-responsive proteins in potato. <i>Hortic. Environ. Biotechnol.</i> (2018) 59: 315. Zhu et al. (2018). Cloning and expression of a new cytoplasmic small heat shock protein gene from <i>Pinellia ternata</i> . <i>Acta Physiologiae Plantarum</i> March 2018, 40:44. |

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Murano et al. (2017). A purine-type heat shock protein 90 inhibitor promotes the heat shock response in Arabidopsis. *Plant Biotechnology Reports* April 2017, Volume 11, Issue 2, pp 107–113.

McLoughlin et al. (2016) Class I and II Small Heat Shock Proteins Together with HSP101 Protect Protein Translation Factors during Heat Stress. *Plant Physiol.* 2016 Oct;172(2):1221-1236.

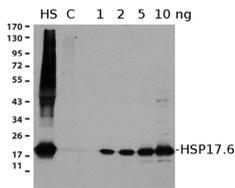
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Yamauchi et al. (2015). Reactive short-chain leaf volatiles act as powerful inducers of abiotic stress-related gene expression.

Pyatrikas et al. (2014). Mitochondrial Retrograde Regulation of HSP101 Expression in Arabidopsis thaliana under Heat Stress and Amiodarone Action. *Russian J. Plant Physiol.* 61 (1):88-98. (Western blot, cell culture)

Florentin et al. (2013). Stress induces plant somatic cells to acquire some features of stem cells accompanied by selective chromatin reorganization. *Dev. Dyn.* Oct; 242(10):1121-33.

Application example



15 µg of total protein from (HS) heat shocked *Arabidopsis thaliana*, (C) *Arabidopsis thaliana* control plants, (1,2,5,10) 1,2,5,10 ng of recombinant purified HSP17.6 were separated on 15%SDS-PAGE and blotted 1h to nitrocellulose (Biorad). Blots were incubated in the primary antibody at a dilution of 1: 1000 for 1h at room temperature with agitation and secondary HRP-conjugated antibody (1: 10 000).