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

Product no AS08 287

HSP101 | ClpB heat shock protein, C-terminal

Product information

Immunogen	Recombinant protein of *Arabidopsis thaliana* Hsp101/ClpB, C-terminal 145 amino acids UniProt: P42730, TAIR: At1g74310
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

Recommended dilution	1 : 1000 (WB)
Expected | apparent MW	101 kDa
Confirmed reactivity	*Arabidopsis thaliana, Agave tequilana, Citrus sp., Cucumis sativus L.* var Krak
Predicted reactivity	*Citrus sinensis, Glycine max, Nicotiana tabacum, Oryza sativa, Populus trichocarpa, Triticum aestivum, Vitis vinifera*
Not reactive in	No confirmed exceptions from predicted reactivity are currently known
Additional information	**When using this antibody on a new species** with this antibody perform a following experiment: prepare a leaf extract from a leaf without stress and one that has been heat stressed as follows: Take a whole leaf (in the case of plants with small leaves, like *Arabidopsis thaliana*), or part of a leaf and place on wet filter paper in a petri dish. Heat stress in the dark at 38°C/90 minutes to 2 hours and then allow to recover for 2 hours at room temperature in low light (leave it on the lab bench). You should be able to load 10 ug for western blotting and compare the non-heat stressed to the heat stressed sample. Use *Arabidopsis thaliana* leaf as a positive control. Following such treatment 1 ug of a total protein from *Arabidopsis thaliana* allows detection of HSP101.
Selected references	Bychkov et al. (2022) The role of PAP4/FSD3 and PAP9/FSD2 in heat stress responses of chloroplast genes. Plant Sci. 2022 Sep;322:111359. doi: 10.1016/j.plantsci.2022.111359. Epub 2022 Jun 20. PMID: 35738478. Balfagon et al. (2018). Involvement of ascorbate peroxidase and heat shock proteins on citrus tolerance to combined conditions of drought and high temperatures. Plant Physiol Biochem. 2018 Jun;127:194-199. doi: 10.1016/j.plaphy.2018.03.029. 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. Janicka-Russak et al. (2013). Modification of plasma membrane proton pumps in cucumber roots as an adaptation mechanism to salt stress. J Pant Physiol. March 14. Janicka-Russak et al. (2012). Different effect of cadmium and copper on H+-ATPase activity in plasma membrane vesicles from Cucumis sativus roots. J. Exp. Botany, March 2012, ahead of print.