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Product no AS12 2613

Anti-CPN60A1 | Chaperonin 60 subunit alpha 1 (chloroplastic)

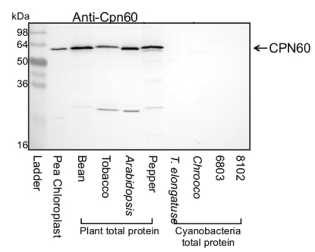
Product information

Immunogen	KLH-conjugated synthetic peptide derived from known CPN60 sequences, including *Arabidopsis thaliana* UniProt P21238 . TAIR AT2G28000. The peptide is conserved in chloroplastic CPN60A1 but NOT the close relative CPN60A2.
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.
Additional information	The antibody will work on loads from 5 µg/well

Application information

Recommended dilution	1 : 1000 (WB)
Expected | apparent MW	57.1 kDa (mature protein)
Confirmed reactivity	*Arabidopsis thaliana*, *Arabidopsis thaliana* cell culture, *Cicer arietinum*, *Nicotiana tabacum*, *Phaseolus vulgaris*, *Pisum sativm*, *Zea mays*
Predicted reactivity	*Aegilops squarrosa, Avicena marina, Brassica napus, Canavalia lineata, Narcissus pseudonarcissus, Oryza sativa, Ricinus communis, Trifolium pRatense, Triticum aestivum* Species of your interest not listed? Contact us
Not reactive in	Cyanobacteria, algae
Selected references	Mu et al. (2024). Plastid HSP90C C-terminal extension region plays a regulatory role in chaperone activity and client binding.Plant J. 2024 Jul 5.doi: 10.1111/tpj.16917. Jeran et al. (2021) 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. Jiang et al. (2020). Plastid chaperone HSP90C guides precursor proteins to the SEC translocase for thylakoid transport. J Exp Bot. 2020 Aug 27;eraa399.doi: 10.1093/jxb/eraa399. Dogra et al. (2019). 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. Lande et al. (2019). Dehydration-induced alterations in chloroplast proteome and reprogramming of cellular metabolism in developing chickpea delineate interrelated adaptive responses. Plant Physiology and Biochemistry Volume 146, January 2020, Pages 337-348.

application example



Approximately 50-70 µg of total chloroplast or cell protein was extracted from various species by boiling in 4x Sample buffer for 5 min. These proteins were separated on 15 % Tris-Glycine SDS-PAGE run at constant voltage of 100V for 20min and then run at constant current of 15 mA for 1 hrs. Following separation, the proteins were transferred by electroblotting to PVDF (1h 30 min) using 1X Transfer buffer (14.4 gm glycine, 3 gm Tris-base, 200 ml MeOH in 1l ddH2O) pH 8.3. Blots were blocked with TBS with 1% Tween and 3% NFM (TBST w/NFM)) for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 1000 for 1h at RT with agitation, and then left in 4°C

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overnight. The antibody solution was decanted and the blot was rinsed briefly three times, and then washed 3 times X 10 min in TBST w/NFM at RT with agitation. The blot was incubated in secondary antibody (Donkey anti-rabbit IgG HRP-conjugated) diluted to 1:15 000 in TBST for 1h at RT with agitation. The blot was washed as above and developed using Thermo SuperSignal West Pico Chemiluminescent Substrate reagent according to the manufacturer's instructions and imaged on a Bio-Rad ChemiDoc Imager using an exposure time of 80 seconds.

Courtesy of Dr. Barry Bruce lab, University of Tennesee-Knoxville, USA