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Product no AS16 4098

Anti-STN7, Serine/threonine-protein kinase STN7 (chloroplastic)

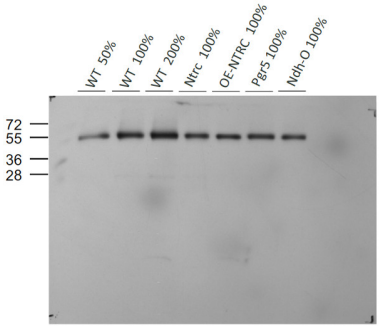
Product information

Immunogen	KLH-conjugated synthetic peptide specific for *Arabidopsis thaliana* STN7 serine/threonine kinase, UniProt: Q9S713, TAIR: At1g68830
Host	Rabbit
Clonality	Polyclonal
Purity	Immunogen affinity purified serum in PBS pH 7.4.
Format	Lyophilized
Quantity	50 µg
Reconstitution	For reconstitution please add 50 µl of sterile water
Storage	Lyophilized antibody can be stored at -20°C for up to 3 years. Re-constituted antibody can be stored at 4°C for several days to weeks. 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 : 1500 (WB)
Expected | apparent MW	63.2 | 44 kDa (on urea gel), 55 kDa (no urea)
Confirmed reactivity	*Arabidopsis thaliana, Nicotiana tabacum*
Predicted reactivity	*Anthurium amnicola, Arabidopsis alpina, Capsicum annuum, Dichanthelium oligosanthes, Glycine soja, Gossypium hirsutum, Hordeum vulgare, Medicago truncatula, Morus notabilis, Nelumbo nucifera, Nicotiana sylvestris, Noccaea caerulescens, Vigna radiata var. Radiata* Species of your interest not listed? Contact us
Not reactive in	*Solanum lycopersicum*
Selected references	Mazur et al. (2021) The SnRK2.10 kinase mitigates the adverse effects of salinity by protecting photosynthetic machinery. Plant Physiol. 2021 Dec 4;187(4):2785-2802. doi: 10.1093/plphys/kiab438. PMID: 34632500; PMCID: PMC8644180. Pralon et al. (2019). Plastoquinone homoeostasis by Arabidopsis proton gradient regulation 6 is essential for photosynthetic efficiency. Commun Biol. 2019 Jun 20;2:220. doi: 10.1038/s42003-019-0477-4. Ancin et al. (2019). Overexpression of thioredoxin m in tobacco chloroplasts inhibits the protein kinase STN7 and alters photosynthetic performance. J Exp Bot. 2019 Feb 5;70(3):1005-1016. doi: 10.1093/jxb/ery415. Rudenko et al. (2019). The role of carbonic anhydrase ?-CA4 in the adaptive reactions of photosynthetic apparatus: the study with ?-CA4 knockout plants. Protoplasma (2019). https://doi.org/10.1007/s00709-019-01456-1 Nikkanen et al. (2018). Multilevel regulation of non-photochemical quenching and state transitions by chloroplast NADPH-dependent thioredoxin reductase. Physiol Plant. 2018 Dec 22. doi: 10.1111/ppl.12914.

Application example



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Isolated thylakoids from *Arabidopsis thaliana* leaves were extracted with grinding buf fer containing 300mM Sucrose, 50 mM Hepes-NaOH pH 7,4, 5 mM MgCl , 1 mM Na-EDT A containing freshly made 10 mM NaF. Then the 2 chloroplast pellet was dissolved with shock buf fer containing, 5 mM Sucrose, 10 mM Hepes-NaOH pH 7,4, 5 mM MgCl containing freshly made 2 NaF (10 mM), whereafter pellet containing thylakoid fraction was carefully again dissolved in to the storage buf fer containing 100mM sucrose, 10 mM Hepes-NaOH pH 7,4, 10 mM MgCl in the presence of freshly made 10 mM 2 NaF . Protein amounts loaded according to PORRA corresponding to 1, 2, or 4µg of Chlorophyll, and denatured with Laemmli buf fer at C or 65C for 5 min. Proteins were then further separated on 15 % Acryl Amide containing 6M Urea with SDS-P AGE, blotted 1h to PVDF membrane using semi-dry transfer (Hoefer TE77X) followed by rinsing in 1xTBS for 2 min. Membranes were then blocked with 4% Milk in 1XTTBS for 2 hrs at room temperature (R T) with agitation. Blot was then incubated overnight in af finity purified Stn7 primary antibody (Agrisera) at a dilution of 1:1500 for 18hrs at +4C with slow agitation in 1% Milk, 1XTTBS. The antibody solution was collected, and the blot was rinsed 5 minutes 3 times each with 1x T-TBS at RT with agitation. Blot was incubated with HRP conjugated conjugated goat anti-rabbit IgG secondary antibody (Agrisera, AS09 602) diluted to 1:25 000 in 1% Milk, 1XTTBS for 2hrs at R T with agitation. The blot was washed 10 min in 1X TTBS, with additional washes of 4X4 min in 1XTBS. Blot was then incubated in ECL solution for 5 min. Film was exposured for 2minutes.

Courtesy of Dr. Jouni Tivola, University of Turku, Finland