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Product no AS10 1601

Anti-STN8 | Serine/threonine-protein kinase STN8 (chloroplastic)

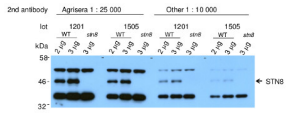
Product information

Immunogen	KLH-conugated synthetic peptide (amino acids 425-438) specific for *Arabidopsis thaliana* STN8 serine/threonine proteinkinase, UniProt: Q9LZV4 TAIR:At5g01920
Host	Rabbit
Clonality	Polyclonal
Purity	Immunogen affinity purified serum in PBS pH 7.4.
Format	Lyophilized
Quantity	50 µg
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	An extract from STN8 mutant needs to be used in pararel to determine specific band of STN8 protein on a western blot

Application information

Recommended dilution	1 : 2000 (WB)
Expected | apparent MW	54.9 kDa or 46 kDa on 6 M urea gel
Confirmed reactivity	*Arabidopsis thaliana, Triticum aestivum*
Predicted reactivity	*Oryza sativa* Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known
Additional information	For best results with this antibody sample buffer needs to contain 6 M urea (138mM TrisHCl pH 6.8, **6M urea**, 22.2% Glycerol, 4.3% SDS). STN8 is a nuclear encoded protein which is localized in chloroplast, hence posses a chloroplastic target peptides (cTP) at the beginning of the amino acid sequence which is cut off. Accroding to TargetP (program that predicts the length of the cTP:s) the length of cTP for Stn8 is 49 amino acids. STN8 portein mobility can be also affected by urea present in the gel. Due to a high background signal with LHCII it is adviced to cut off a membrane below 30 kDa marker.
Selected references	Li et al. (2015). Effect of hydrogen sulfide on D1 protein in wheat under drought stress. Acta Physiologiae Plantarum November 2015, 37:225. Flood et al. (2014). Natural variation in phosphorylation of photosystem II proteins in Arabidopsis thaliana: is it caused by genetic variation in the STN kinases? Philos Trans R Soc Lond B Biol Sci. 2014 Mar 3;369(1640):20130499. doi: 10.1098/rstb.2013.0499. Print 2014. Yin et al. (2012). Photosystem II Function and Dynamics in Three Widely Used Arabidopsis thaliana Accessions. PLOS ONE, open access.

Application example



Thylakoids (2 or 3 µg of chlorophyll/lane) from Arabidopsis thaliana wide type (WT) and a stn8 mutant were isolated according to Sirpiö et al (2011, Methods Mol Biol. 2011; 775:19-30). Denaturated samples were separated on 12 % SDS-PAGE with 6 M urea and blotted for 1h to a PVDF membrane using a semi-dry transfer. Blots were blocked with 5% milk in TBS for 1h at room temperature (RT) with slow agitation. Blots were incubated in primary antibodies at a dilution of 1: 1 000 overnight at 4°C with slow agitation in 1 % milk/TTBS. Blots were rinsed briefly once, then washed twice for 10 min with TTBS at RT with vigorous agitation. Blots were incubated in secondary antibodies (anti-rabbit IgG horse radish peroxidase conjugated) in 1% milk/TTBS for 2 hours at RT with slow agitation, washed as above and incubated for 5 min with ECL solution

according to the manufacturers' instructions. Exposure time was 2 min. Since the STN8 antibody cross-reacts with LHCII, the lower part of the gel should be cut out before blotting.

Courtesy Virpi Paakkarinen, University of Turku, Finland