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product AS03 035A

SPS | sucrose phosphate synthase, global

product information

background	**SPS** (sucrose phosphate synthase, EC 2.4.1.14) is the key enzyme of carbon flux into sucrose fixation in plants. It catalyzes the synthesis of sucrose-phosphate from UDP-glucose and fructose-6-phosphate predominantly in the cytosol of sucrose-source leaf tissue.
immunogen	Synthetic peptide derived from conserved region within plant SPS protein sequences, including *Arabidopsis thaliana* At1g04920
antibody format	rabbit polyclonal, affinity purified serum in PBS pH 7.4, lyophilized
quantity	200 µg - for reconstitution add 100 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)
additional information	to be added when available

application information

recommended dilution	1: 1000 - 1: 5000 with standard ECL (WB)
expected | apparent MW	120 | 120-130 kDa (fragments of 30/90 kDa may be detected)
confirmed reactivity	*Arabidopsis thaliana, Hordeum vulgare, Lycopersicum esculentum, Lycopersicum penelli, Solanum tuberosum, Triticum aestivum, Zea mays*
predicted reactivity	dicots and monocots, *Physcomitrella patens*
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	to be added when available
selected references	Bölter et al. (2007) Localization of Arabidopsis NDPK2-revisited. Planta 226: 1059-1056 Whittaker et al. (2007) Sucrose phosphate synthase activity and the co-ordination of carbon partitioning during sucrose and amino acid accumulation in desiccation-tolerant leaf material of the C4 resurrection plant Sporobolus stapfianus during dehydration. J Ex. Bot. 58: 3775-3787

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application example

10 µg of total leaf protein from (**1**) *A.thaliana*,(**3**) *Zea mays* and (**4**) *Hordeum vulgare* extracted with PEB (**AS08 300**) as well as **10 µg cytosolic protein** from (**2**) *A.thaliana* were separated on **4-12%** NuPage (Invitrogen) **LDS-PAGE** and blotted 1.5h (30V) to **nitrocellulose**. Filters were blocked 1h with 2% low-fat **milk powder** in TBS-T (0.1% TWEEN 20) and probed with anti-SPS (AS03 035A, **1:2000**, 1h) and secondary anti-rabbit (**1:20000**, 1 h) antibody (HRP conjugated, Abcam) in TBS-T containing 2% low fat milk powder. Antibody incubations where followed by washings in TBS-T (15, +5, +5, +5 min). All steps were performed at RT with agitation. Signal was detected with **standard ECL** (GE Healthcare) using a Fuji LAS-3000 CCD (90s, high sensitivity).