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Product no AS15 2873

SBPase | Sedoheptulose-1,7-bis phosphatase

Product information

Background	**SBPase (Sedoheptulose-1,7-bis phosphatase)** is a chloroplast enzyme involved in the carbon reduction of the Calvin cycle, part of carbohydrate metabolism.
Immunogen	KLH-conjugated synthetic peptide conserved across known protein sequences of SBP including *Arabidopsis thaliana* UniProt: P46283, TAIR: AT3G55800
Host	Rabbit
Clonality	Polyclonal
Purity	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 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)
Related products	AS15 2873S | SBPase | Sedoheptulose-1,7-bis phosphatase positive control/quantitation standard for SBPase quantification using quantitative western blot method antibodies to proteins involved in carbohydrates metabolism Plant and algal protein extraction buffer

Application information

Recommended dilution	1 : 1000-1 : 5000 (WB)
Expected | apparent MW	42 kDa
Confirmed reactivity	*Arabidopsis thaliana, Chlamydomonas* sp. (strain W80), *Cucumis sativus, Hordeum vulgare, Oryza sativa, Zea mays*
Predicted reactivity	*Arabidopsis lyrata, Auxenochlorella protothecoides, Brachypodium distachyon , Brassica rapa, Coccomyxa subellipsoidea C-169 GN, Dunaliella tertiolecta, Ectocarpus siliculosus, Genlisea aurea, Glycine soja, Gossypium raimondii , Marchantia polymorpha, Medicago truncatula, Mesostigma viride, Morus notabilis, Nannochloropsis sp., Nicotiana tabacum, Populus trichocarpa, Ricinus communis, Sorghum bicolor, Spinacia oleracea, Tetraselmis sp. GSL018, Theobroma cacao, Triticum aestivum, Triticum urartu, Zea mays, Volvox carteri* Species of your interest not listed? Contact us
Not reactive in	Cyanobacteria, *Physcomitrella patens*
Selected references	Fukayama et al. (2018). Expression level of Rubisco activase negatively correlates with Rubisco content in transgenic rice. Photosynth Res. 2018 May 30. doi: 10.1007/s11120-018-0525-9. Li et al. (2018). Comparative proteomic analysis of key proteins during abscisic acid-hydrogen peroxide-induced adventitious rooting in cucumber (Cucumis sativus L.) under drought stress. Journal of Plant Physiology Volume 229, October 2018, Pages 185-194.

For high resolution images, please visit the specific product page at www.agrisera.com

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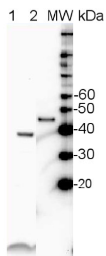
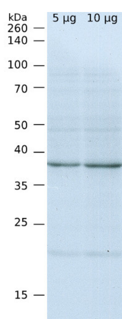
Application example



10 µg of total protein from *Arabidopsis thaliana* leaf **(1)** , SBPase protein standard AS15 2873S **(2)** were extracted with Agrisera Protein Extraction Buffer PEB (AS08 300). Samples were diluted with 1X sample buffer (NuPAGE LDS sample buffer (Invitrogen) supplemented with 50 mM DTT and heat at 70°C for 5 min and keept on ice before loading. Protein samples were separated on 4-12% Bolt Plus gels, LDS-PAGE and blotted for 70 minutes to PVDF using tank transfer. Blots were blocked immediately following transfer in 2% blocking reagent or 5% non-fat milk dissolved in 20 mM Tris, 137 mM sodium chloride pH 7.6 with 0.1% (v/v) Tween-20 (TBS-T) for 1h at room temperature with agitation. Blots were incubated in the primary antibody at a dilution of 1: 10 000 (in blocking reagent) for 1h at room temperature with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, and then washed 1x15 min and 3x5 min with TBS-T at room temperature with agitation. Blots were incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, recommended secondary antibody AS09 602, Agrisera) diluted to 1:25 000 in blocking reagent for 1h at room temperature with agitation. The blots were washed as above. The blot was developed for 5 min with chemiluminescent detection reagent of extreme femtogram sensitivity, according the manufacturers instructions. Images of the blots were obtained using a CCD imager (VersaDoc MP 4000) and Quantity One software (Bio-Rad). Exposure time was 30 seconds.



5 or 10 µg of total protein from *Chlamydomonas reinhardtii* extracted with 10 mM Tris/HCl pH7.5, 80 mM NaCl, 1 mM EDTA, 1 % (w/v) Glycerol, 1 mM DTT, 1x protease inhibitor cocktail (Roche) and denatured in SDS sample buffer for 5 min. at 95°C were separated on 12 % SDS-PAGE and blotted over night to nitrocellulose using tank transfer. Blots were blocked with 3 % milk; for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 2 500 in blocking buffer for 1h at RT with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 5 min. 5x in TBS-T (0.05 %) at RT with agitation. Blot was incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated from Agrisera AS09 602) diluted to 1:25 000; for 1h at RT with agitation. The blot was washed as above and developed using Luminol-H_2O_2 and p-Coumaric acid. Exposure time of X-ray film was 1 hour.

Courtesy of Dr. Sebastian Mahlow, Prof. Maria Mittag, Institute of General Botany and Plant Physiology, University of Jena, Germany