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Agrisera AB | Box 57 | SE-91121 Vännäs | Sweden | +46 (0)935 33 000 | www.agrisera.com

Product no AS08 372

Anti-Pex14p | Peroxisomal marker

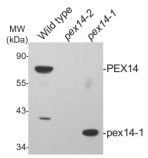
Product information

Immunogen	Recombinant, soluble N-terminal domain of *Arabidopsis thaliana* Pex14p UniProt:Q9FE40, TAIR: At5g62810) that mediates PEX5 and PEX19 binding. The transmembrane and coiled-coil domains of PEX14 were replaced with a dual StrepII-His6 tag.
Host	Rabbit
Clonality	Polyclonal
Purity	Immunogen affinity purified serum in PBS pH 7.4.
Format	Lyophilized
Quantity	50 µg
Reconstitution	For reconstitution add 25 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	Pex14p is prone to degradation

Application information

Recommended dilution	1 : 10 000 (WB)
Expected | apparent MW	55.5 | 75-65 kDa (depending on the gel system)
Confirmed reactivity	*Arabidopsis thaliana, Lupinus albus, Solanum tuberosum, Zea mays*
Predicted reactivity	*Cucumis melo, Magnaporthe oryzae* Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known
Additional information	Antibodies will detect Pex14 protein in both light- and dark-grown seedlings grown on petri dishes and in rosette leaves of adult plants grown in soil
Selected references	Kurepa and Smalle (2023). Differential oxidative stress homeostasis in two burley tobacco varieties is linked to different peroxisomal glycolate oxidase levels. Plant Stress Volume 9, September 2023, 100194. Llinas et al. (2022) An Arabidopsis pre-RNA processing8a (prp8a) missense allele restores splicing of a subset of mis-spliced mRNAs. Plant Physiol. 2022 Aug 1;189(4):2175-2192. doi: 10.1093/plphys/kiac221. PMID: 35608297. Calero-Munoz et al. (2019). Cadmium induces reactive oxygen species-dependent pexophagy in Arabidopsis leaves. Plant Cell Environ. 2019 Sep;42(9):2696-2714. doi: 10.1111/pce.13597. McLoughlin et al. (2018). Maize multi-omics reveal roles for autophagic recycling in proteome remodelling and lipid turnover. Nat Plants. 2018 Dec;4(12):1056-1070. doi: 10.1038/s41477-018-0299-2. Gonzalez et al. (2018). A pex1 missense mutation improves peroxisome function in a subset of Arabidopsis pex6 mutants without restoring PEX5 recycling. Proc Natl Acad Sci U S A. 2018 Apr 3;115(14):E3163-E3172. doi: 10.1073/pnas.1721279115. Vincent et al. (2017). A genome-scale analysis of mRNAs targeting to plant mitochondria: upstream AUGs in 5' untranslated regions reduce mitochondrial association. Plant J. 2017 Dec;92(6):1132-1142. doi: 10.1111/tpj.13749.

Application example



Twenty 5-day-old light grown *Arabidopsis thaliana* seedlings (wild type, the pex14-2 null allele, and the pex14-1 truncation allele) were ground with a pestle in a 1.5 mL tube on dry ice following the addition of a double volume (60 µL) of NuPAGE 2x loading buffer (Invitrogen). After centrifugation, 20 µL of supernatant was trasnferred to a fresh tube with 2.1 µL 0.5 M DTT and boiled at 100 °C for 5 mins. Samples were loaded onto NuPAGE 10% Bis-Tris gel (Invitrogen) next to Cruz Marker (Santa Cruz Biotechnology). After electrophoresis, proteins were transferred for 30 mins at 24 V to a Hybond ECL nitrocellulose membrane (Anersham Pharmacia Biotech) using NuPAGE transfer buffer (Invitrogen). The blot

was blocked for 1 h 4 °C in 8% non-fat dry milk in TBS-T (blocking buffer),and incubated overnight wiht agitation at 4 °C with primary antibody (1:10 000 rabbit anti-PEX14, AS08 372, Agrisera) diluted in blocking buffer. The antibody soliution was decanted and the blot was rinsed 3 times, 5 min each, with blocking buffer at 4 °C. The blot was incubated with horseradish peroxidase-conjugated anti-rabbit secondary antibody (1:5000), diluted in blocking buffer for 4 h at 4 °C with agitation. The blot was washed with 3 times, 5 min each, with TBS-T and developed with chemiluminescent reagent (Advanta), 1:10 dilution in water.

Courtesy Sarah Burkhart and Bonnie Bartel, Rice University, USA.