Agrisera AB | Box 57 | SE-91121 Vännas | Sweden | +46 035 33000 | www.agrisera.com

product **AS08 351**

Toc75 | Protein TOC75-3, chloroplastic, POTRA domain 3

product information

background	**OEP 75 or Toc75**; Chloroplast outer envelope membrane protein from *Pisum sativum* (pea), Predicted to contain 3 POTRA domains at N-terminus. Believed to be the protein conducting channel of the Toc translocon and assembles as an 18 stranded ß-barrel (EMBO J. (1995) 14:11, 2436-2446); In Arabidopsis there are five members of this Family Toc75 (I-V), atToc75III is most closely related to psToc75. Additionally, it is structurally related to members of the bacterial surface antigen super-family including: OMA87; Outer membrane protein/protective antigen, (COG4775, COG4775) [Cell envelope biogenesis, outer membrane; YaeT; outer membrane protein assembly complex, (TIGR03303); FhaC; Hemolysin activation/secretion protein (COG2831) [Intracellular trafficking and secretion]
immunogen	psTOC75; Predicted POTRA Domain #3; Expressed and purified in *E. coli* using the Impact System from NEB. Peptide confirmed by MALDI. Q43715
antibody format	rabbit; polyclonal; serum; lyophilized
quantity	200 µl - for reconstitution add 200 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), flow cytometry (FACS), immunolocalization (IL)
related products	AS08 345 | anti- Toc75 | Protein TOC75-3, chloroplastic, POTRA domain 1 rabbit antibodies
additional information	to be added when available

application information

recommended dilution	1: 2000 - 1: 25 000, 1: 100 000 (WB), 1: 500 (FACS). 1: 100 (IL)
expected | apparent MW	88 | 75 kDa (ocassionally a processing intermediate at 78 kDa is observed)
confirmed reactivity	*Arabidopsis thaliana, Nicotiana tabacum, Pisum sativum, Spinacia oleracea*, *Thellungiella salsuginea*, some cross-reactivity was observed for cyanobacteria including: *Synechocystis, Synechococcus and Thermosynechococcus* sp.
predicted reactivity	*Ricinus communis, Vitis vinifera, Populus trichocarpa*
not reactive in	no confirmed exceptions from predicted reactivity known in the moment

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additional information

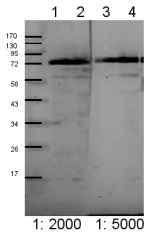
antibody detects Toc75 POTRA domain 3 as purified protein, in chloroplast fraction and in crude envelope fraction

selected references

Vera-Estrella et al. (2014). Comparative 2D-DIGE analysis of salinity responsive microsomal proteins from leaves of salt-sensitive Arabidopsis thaliana and salt-tolerant Thellungiella salsuginea. J Proteomics. 2014 Jun 2. pii: S1874-3919(14)00288-7. doi: 10.1016/j.jprot.2014.05.018.

application example

580 ng of Chl of *Pisum sativum* plants (10 day old) **(2, 4)** and 10 µg of combined envelopes of *Pisum sativum* 10 day-old **(1,3)** were separated on 15% SDS-PAGE and blotted 2h to PVDF. PVDF was blocked 1h with 3% non-fat milk powder in TBS-T (0.1% TWEEN 20) and probed with anti-Toc75 POTRA domain 3 antibodies AS08 351 (1:2000 and 1: 5000, 1h) and secondary donkey-anti-rabbit (1:20000, 1 h) antibody (HRP conjugated) in TBS-T containing 3% non fat milk powder. Antibody incubations were followed by washings in TBS-T. All steps were performed at RT with agitation. Blots were developed for 5 min with HRP substrate Peroxide solution & luminol detection reagent according to the manufacturers instructions (Millipore). Exposure time was 600 seconds.



Ashita Dave and Barry D. Bruce (UTK)