

Agrisera

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Product no **AS06 152**

AOX1 | Algal Alternative oxidase 1

Product information

Background	The mitochondrial AOX (alternative oxidase) of the unicellular green alga <i>Chlamydomonas reinhardtii</i> is encoded by two different genes, the <i>Aox1</i> and <i>Aox2</i> . The alternative respiratory pathway is comprised of a single homodimeric protein – AOX – and functions as a mechanism to decrease the formation of reactive oxygen species (ROS) produced during respiratory electron transport. Alternative oxidase expression is influenced by different stress stimuli.
Immunogen	whole presumed mature AOX1 protein from from <i>Chlamydomonas reinhardtii</i> UniProt: O65000 fused to GST
Host	Rabbit
Clonality	Polyclonal
Purity	Serum
Format	Lyophilized
Quantity	50 µl
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	AS04 054 Anti-plant alternative oxidase 1 and 2, polyclonal rabbit antibodies Collection of antibodies to <i>Chlamydomonas</i> proteins Algal protein extraction buffer Secondary antibodies
Additional information	Cellular [compartment marker] of <i>Chlamydomonas reinhardtii</i> mitochondrial inner membrane

Application information

Recommended dilution	1 : 10 000 (WB)
Expected apparent MW	36 36 kDa (<i>Chlamydomonas reinhardtii</i>)
Confirmed reactivity	<i>Chlamydomonas reinhardtii</i>
Predicted reactivity	<i>Aspergillus niger</i> , <i>Gonium pectorale</i> , <i>Monoraphidium neglectum</i> , <i>Nannochloropsis gaditana</i> , <i>Ostreococcus lucimarinus</i> , <i>Tettrabaena socialis</i> , <i>Volvox carteri f. nagariensis</i> Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known.
Selected references	Perlaza et al. (2019). The Mars1 kinase confers photoprotection through signaling in the chloroplast unfolded protein response. <i>Elife</i> . 2019 Oct 15;8. pii: e49577. doi: 10.7554/eLife.49577. Kaye et al. (2019). The mitochondrial alternative oxidase from <i>Chlamydomonas reinhardtii</i> enables survival in high light. <i>J Biol Chem</i> . 2019 Jan 25;294(4):1380-1395. doi: 10.1074/jbc.RA118.004667. Zalutskaya et al. (2015). The <i>Chlamydomonas reinhardtii</i> alternative oxidase 1 is regulated by heat stress. <i>Plant Physiol Biochem</i> . 2015 Dec;97:229-34. doi: 10.1016/j.plaphy.2015.10.014. Dang et al. (2014). Combined Increases in Mitochondrial Cooperation and Oxygen Photoreduction Compensate for Deficiency in Cyclic Electron Flow in <i>Chlamydomonas reinhardtii</i> . <i>Plant Cell</i> . 2014 Jul 2. pii: tpc.114.126375.

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Inman (2013). Characterization of the Alternative Oxidase from the Psychrophilic Green Alga *Chlamydomonas* sp. UWO241. Thesis.

Bohne et al. (2013). Reciprocal Regulation of Protein Synthesis and Carbon Metabolism for Thylakoid Membrane Biogenesis. PLOS, Open Access.

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