

Agrisera

This product is for research use only (not for diagnostic or therapeutic use)

contact: support@agrisera.com

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

Product no **AS04 053A**

COXII | Plant Cytochrome oxidase subunit II (affinity purified)

Product information

Background	Cytochrome c oxidase (COX) catalyzes the reduction of oxygen to water in the respiratory chain in the inner mitochondrial membrane. Subunits 1-3 form the functional core of the enzyme complex. Subunit 2 (COXII) transfers the electrons from cytochrome c via its binuclear copper A center to the bimetallic center of the catalytic subunit 1. Alternative name: cytochrome c oxidase subunit 2
Immunogen	<u>KLH</u> -conjugated synthetic peptide fully conserved in all available protein sequences from eudicots including <i>Arabidopsis thaliana</i> <u>AtmG00160</u> , monocots including <i>Oryza sativa</i> <u>P04373</u> and <i>Physcomitrella patens</i> <u>Q1XGA9</u>
Host	Rabbit
Clonality	Polyclonal
Purity	Affinity purified serum
Format	Lyophilized in PBS pH 7.4
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	Blue Native-PAGE (BN-PAGE), Western blot (WB)
Related products	AS04 052 Anti-COXII (plant), chicken antibodies AS04 053A-200 Anti-COXII cytochrome oxidase subunit II (plant), rabbit antibodies AS04 053PRE COXII cytochrome oxidase subunit II, pre-immune serum AS04 053P COXII cytochrome oxidase subunit II Blocking peptide Antibodies to other mitochondrial proteins Plant protein extraction buffer
Additional information	Cellular [compartment marker] of mitochondrial inner membrane

Application information

Recommended dilution	1 : 1000 (BN-PAGE), 1 : 1000 (WB)
Expected apparent MW	29.4 30 kDa (for <i>Arabidopsis thaliana</i>)
Confirmed reactivity	<i>Arabidopsis thaliana</i> (leaf extract and isolated mitochondria), <i>Betula nana</i> , <i>Brassica napus</i> , <i>Brassica oleracea</i> , <i>Cicer arietinum</i> , <i>Cucumis melo</i> , <i>Cucumis sativus</i> , <i>Erophorum vaginatum</i> , <i>Hordeum vulgare</i> , <i>Lilium longiflorum</i> , <i>Nicotiana tabacum</i> , <i>Picea abies</i> , <i>Plantago major</i> , <i>Plantago euryphylla</i> , <i>Silene uniflora</i> , <i>Silene dioica</i> , <i>Physcomitrella patens</i> , <i>Triticum aestivum</i> , <i>Triticum durum</i> Desf. , <i>Zea mays</i> , <i>Vicia faba</i> , <i>Quercus rubra</i>
Predicted reactivity	<i>Cucumis melo</i> , <i>Glycine max</i> , <i>Oryza sativa</i> , <i>Physcomitrella patens</i> , <i>Pisum sativum</i> , <i>Triticum aestivum</i> , <i>Vigna radiata</i> Species of your interest not listed? Contact us
Not reactive in	<i>Saccharina japonica</i>
Additional information	Antibody detects COXII protein most optimally in membrane fractions. The signal is weak in a in total protein extract. Blue Native gel electrophoresis (BN-PAGE) has been performed on samples solubilized with digitonin (4:1) and loaded at 100 µg/well. Gel thickness was 2 mm with 4.5-16 % gradient. For high resolution images, please visit the specific product page at www.agrisera.com

Selected references

- [Makino et al. \(2020\)](#). Induction of Terminal Oxidases of Electron Transport Chain in Broccoli Heads Under Controlled Atmosphere Storage. *Foods*, 9 (4)
- [Wang et al. \(2020\)](#) Rerouting of ribosomal proteins into splicing in plant organelles. *BioRxiv*, DOI: 10.1101/2020.03.03.974766 .
- [Barua et al. \(2019\)](#). Dehydration-responsive nuclear proteome landscape of chickpea (*Cicer arietinum* L.) reveals phosphorylation-mediated regulation of stress response. *Plant Cell Environ.* 2019 Jan;42(1):230-244. doi: 10.1111/pce.13334.
- [Waltz et al. \(2019\)](#). Small is big in *Arabidopsis* mitochondrial ribosome. *Nat Plants.* 2019 Jan;5(1):106-117. doi: 10.1038/s41477-018-0339-y.
- [Shull et al. \(2019\)](#). Anatase TiO₂ nanoparticles induce autophagy and chloroplast degradation in thale cress (*Arabidopsis thaliana*). *Environ Sci Technol.* 2019 Jul 29. doi: 10.1021/acs.est.9b01648.
- [Wang et al. \(2019\)](#). SMALL KERNEL4 is required for mitochondrial *cox1* transcript editing and seed development in maize. *J Integr Plant Biol.* 2019 Jul 23. doi: 10.1111/jipb.12856.
- [Chen et al. \(2019\)](#). PPR-SMR1 is required for the splicing of multiple mitochondrial introns and interacts with Zm-mCSF1 and is essential for seed development in maize. *J Exp Bot.* 2019 Jun 28. pii: erz305. doi: 10.1093/jxb/erz305.
- [Waltz et al. \(2019\)](#). Small is big in *Arabidopsis* mitochondrial ribosome. *Nat Plants.* 2019 Jan;5(1):106-117. doi: 10.1038/s41477-018-0339-y.
- [Gaven et al. \(2018\)](#). Dehydration-induced proteomic landscape of mitochondria in chickpea reveals large-scale coordination of key biological processes. *J Proteomics.* 2018 Sep 19. pii: S1874-3919(18)30349-X. doi: 10.1016/j.jprot.2018.09.008
- [Barua et al. \(2018\)](#). Dehydration-responsive nuclear proteome landscape of chickpea (*Cicer arietinum* L.) reveals phosphorylation-mediated regulation of stress response. *Plant Cell Environ.* 2018 May 10. doi: 10.1111/pce.13334.
- [Migocka et al. \(2018\)](#). Cucumber metal tolerance protein 7 (CsMTP7) is involved in the accumulation of Fe in mitochondria under Fe excess. *Plant J.* 2018 Jun 22. doi: 10.1111/tpj.14006.
- [Dai et al. \(2018\)](#). Maize Dek37 Encodes a P-Type PPR Protein That Affects Cis-splicing of Mitochondrial *nad2* Intron 1 and Seed Development. *Genetics.* 2018 Jan 4. pii: genetics.300602.2017. doi: 10.1534/genetics.117.300602.
- [Nageel et al. \(2017\)](#). *Arabidopsis* SH3P2 is an ubiquitin-binding protein that functions together with ESCRT-I and the deubiquitylating enzyme AMSH3. *Proc Natl Acad Sci U S A.* 2017 Aug 7. pii: 201710866. doi: 10.1073/pnas.1710866114.
- [Garmash et al. \(2017\)](#). Expression profiles of genes for mitochondrial respiratory energy-dissipating systems and antioxidant enzymes in wheat leaves during de-etiolation. *J Plant Physiol.* 2017 Aug;215:110-121. doi: 10.1016/j.jplph.2017.05.023.
- [Weissenberger et al. \(2017\)](#). The PPR protein SLOW GROWTH 4 is involved in editing of *nad4* and affects the splicing of *nad2* intron 1. *Plant Mol Biol.* 2017 Mar;93(4-5):355-368. doi: 10.1007/s11103-016-0566-4.
- [Cai et al. \(2017\)](#). Emp10 encodes a mitochondrial PPR protein that affects the cis-splicing of *nad2* intron 1 and seed development in maize. *Plant J.* 2017 Mar 27. doi: 10.1111/tpj.13551.
- [Schimmeyer et al. \(2016\)](#). L-Galactono-1,4-lactone dehydrogenase is an assembly factor of the membrane arm of mitochondrial complex I in *Arabidopsis*. *Plant Mol Biol.* 2016 Jan;90(1-2):117-26. doi: 10.1007/s11103-015-0400-4. Epub 2015 Oct 31.
- [Li et al. \(2016\)](#). Characterization of a novel α -barrel protein (AtOM47) from the mitochondrial outer membrane of *Arabidopsis thaliana*. *J Exp Bot.* 2016 Nov;67(21):6061-6075. Epub 2016 Oct 6.
- [Pavlovič et al. \(2016\)](#). Light-induced gradual activation of photosystem II in dark-grown Norway spruce seedlings. *Biochim Biophys Acta.* 2016 Feb 18. pii: S0005-2728(16)30028-7. doi: 10.1016/j.bbabi.2016.02.009.
- [Li et al. \(2015\)](#). Autophagic recycling plays a central role in maize nitrogen remobilization. *Plant Cell.* 2015 May;27(5):1389-408. doi: 10.1105/tpc.15.00158. Epub 2015 May 5.

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