10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

COX4I2 Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a partial recombinant COX4I2.
Catalog # AT1598a

Product Information

Application	WB, IHC, IP, E
Primary Accession	Q96KJ9
Other Accession	NM_032609
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG2a Kappa
Clone Names	1F2
Calculated MW	20010

Additional Information

Gene ID	84701
Other Names	Cytochrome c oxidase subunit 4 isoform 2, mitochondrial, Cytochrome c oxidase subunit IV isoform 2, COX IV-2, COX4I2, COX4L2
Target/Specificity	COX4I2 (NP_115998, 21 a.a. ~ 104 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 IHC~~1:100~500 IP~~N/A E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	COX4I2 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

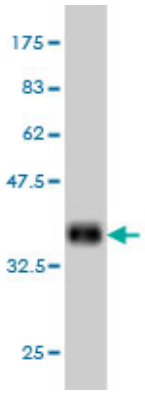
Background

Cytochrome c oxidase (COX), the terminal enzyme of the mitochondrial respiratory chain, catalyzes the electron transfer from reduced cytochrome c to oxygen. It is a heteromeric complex consisting of 3 catalytic subunits encoded by mitochondrial genes and multiple structural subunits encoded by nuclear genes. The mitochondrially-encoded subunits function in electron transfer, and the nuclear-encoded subunits may be involved in the regulation and assembly of the complex. This nuclear gene encodes isoform 2 of subunit IV. Isoform 1 of subunit IV is encoded by a different gene, however, the two genes show a similar structural organization. Subunit IV is the largest nuclear encoded subunit which plays a pivotal role in COX regulation.

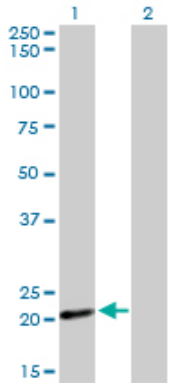
References

1.Oxygen-dependent expression of cytochrome c oxidase subunit 4-2 gene expression is mediated by transcription factors RBPJ, CXXC5 and CHCHD2.Aras S, Pak O, Sommer N, Finley R Jr, Huttemann M, Weissmann N, Grossman LI.Nucleic Acids Res. 2013 Jan 8.2.Cytochrome c oxidase subunit 4 isoform 2-knockout mice show reduced enzyme activity, airway hyporeactivity, and lung pathology.Huttemann M, Lee I, Gao X, Pecina P, Pecinova A, Liu J, Aras S, Sommer N, Sanderson TH, Tost M, Neff F, Aguilar-Pimentel JA, Becker L, Naton B, Rathkolb B, Rozman J, Favor J, Hans W, Prehn C, Puk O, Schrewe A, Sun M, Hofler H, Adamski J, Bekeredjian R, Graw J, Adler T, Busch DH, Klingenspor M, Klopstock T, Ollert M, Wolf E, Fuchs H, Gailus-Durner V, Hrabe de Angelis M, Weissmann N, Doan JW, Bassett DJ, Grossman LI.FASEB J. 2012 Sep;26(9):3916-30. Epub 2012 Jun 22.3.Sex- and brain region-specific role of cytochrome c oxidase in 1-methyl-4-phenylpyridinium-mediated astrocyte vulnerability.Sundar Boyalla S, Barbara Victor M, Roemgens A, Beyer C, Arnold S.J Neurosci Res. 2011 Dec;89(12):2068-82. doi: 10.1002/ jnr.22669. Epub 2011 May 19.4.Brain region-specific vulnerability of astrocytes in response to 3-nitropropionic acid is mediated by cytochrome c oxidase isoform expression.Misiak M, Singh S, Drewlo S, Beyer C, Arnold S.Cell Tissue Res. 2010 Jul;341(1):83-93. Epub 2010 Jul 3.5.Brain region specificity of 3-nitropropionic acid-induced vulnerability of neurons involves cytochrome c oxidase.Singh S, Misiak M, Beyer C, Arnold S.Neurochem Int. 2010 Jun 23. [Epub ahead of print]

Images

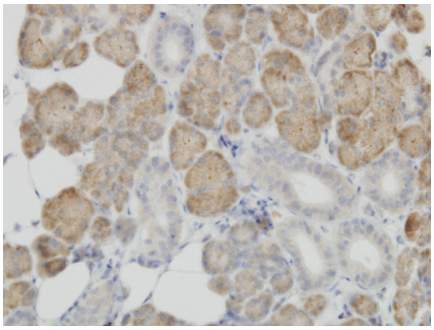


Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (34.98 KDa) .



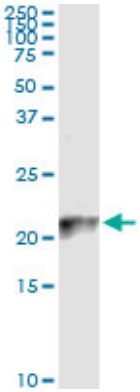
Western Blot analysis of COX4I2 expression in transfected 293T cell line by COX4I2 monoclonal antibody (M01), clone 1F2.

Lane 1: COX4I2 transfected lysate(20 KDa).
Lane 2: Non-transfected lysate.

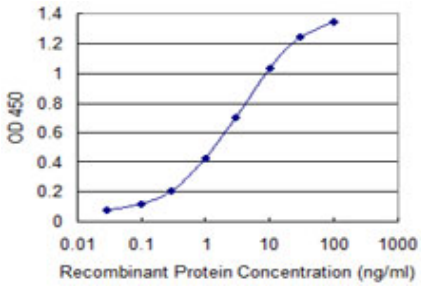


Immunoperoxidase of monoclonal antibody to COX4I2 on formalin-fixed paraffin-embedded human salivary gland. [antibody concentration 3 ug/ml]

Immunoprecipitation of COX4I2 transfected lysate using anti-COX4I2 monoclonal antibody and Protein A Magnetic Bead (U0007), and immunoblotted with COX4I2 MaxPab



rabbit polyclonal antibody.



Detection limit for recombinant GST tagged COX4I2 is 0.03 ng/ml as a capture antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.