10320 Camino Santa Fe, Suite G
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COX4I2 Antibody (monoclonal) (M01)

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

Specification

COX4I2 Antibody (monoclonal) (M01) - Product Information

Application	**IP, WB, IHC, E**
Primary Accession	Q96KJ9
Other Accession	NM_032609
Reactivity	**Human**
Host	**mouse**
Clonality	**Monoclonal**
Isotype	**IgG2a Kappa**
Calculated MW	**20010**

COX4I2 Antibody (monoclonal) (M01) - 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

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.

COX4I2 Antibody (monoclonal) (M01) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot

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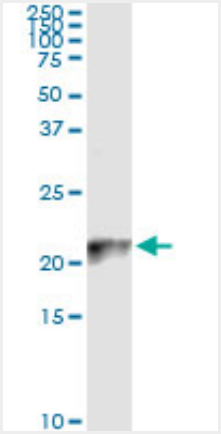
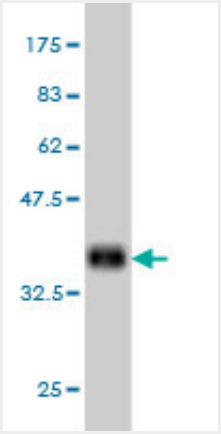
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

COX4I2 Antibody (monoclonal) (M01) - Images



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



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

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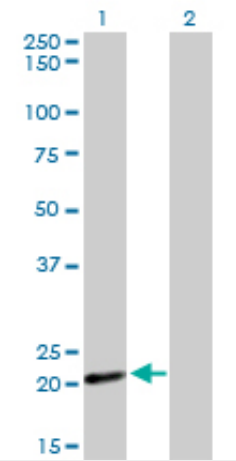
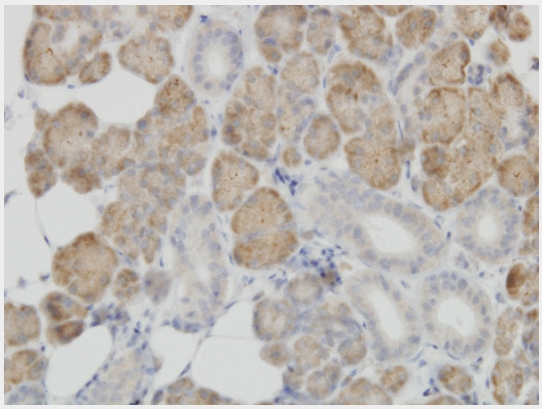
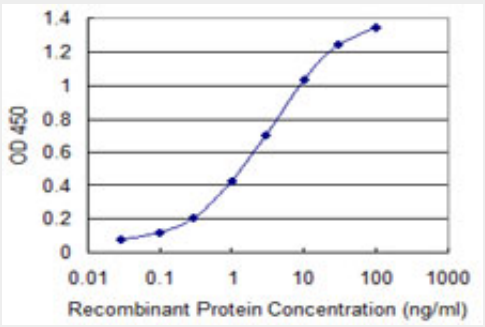


Western Blot analysis of COX4I2 expression in transfected 293T cell line by COX4I2 monoclonal antibody (M01), clone 1F2.

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]



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

COX4I2 Antibody (monoclonal) (M01) - 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.

COX4I2 Antibody (monoclonal) (M01) - 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]