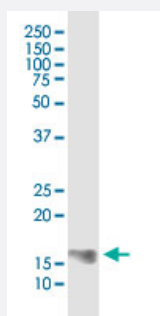


COX4I2 monoclonal antibody (M01), clone 1F2

Catalog # H00084701-M01

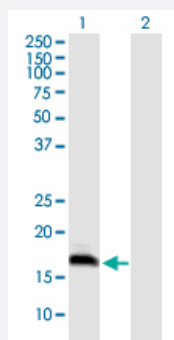
Size 100 ug

Applications



Western Blot (Cell lysate)

COX4I2 monoclonal antibody (M01), clone 1F2. Western Blot analysis of COX4I2 expression in PC-12.

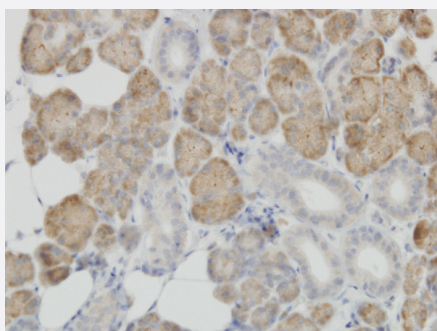


Western Blot (Transfected lysate)

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

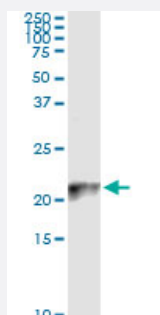
Lane 1: COX4I2 transfected lysate (Predicted MW: 20 KDa).

Lane 2: Non-transfected lysate.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

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

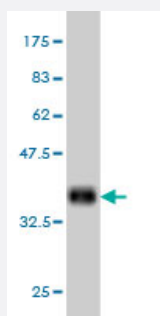
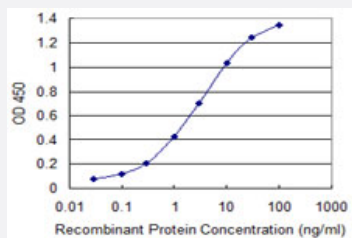


Immunoprecipitation

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

Sandwich ELISA (Recombinant protein)

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



Western Blot detection against Immunogen (34.98 KDa) .

Specification

Product Description	Mouse monoclonal antibody raised against a partial recombinant COX4I2.
Immunogen	COX4I2 (NP_115998, 21 a.a. ~ 104 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Sequence	MHSSEGTTTRGGGKMSPYTNCYAQRYYPMPPEEPFCTELNAEEQALKEKEKGSWTQLTHAEKVAL YRLQFNETFAEMNRRSNEWKT
Host	Mouse
Reactivity	Human, Rat
Interspecies Antigen Sequence	Mouse (72); Rat (78)
Isotype	IgG2a Kappa
Quality Control Testing	Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (34.98 KDa) .
Storage Buffer	In 1x PBS, pH 7.4
Storage Instruction	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Applications

- Western Blot (Cell lysate)

COX4I2 monoclonal antibody (M01), clone 1F2. Western Blot analysis of COX4I2 expression in PC-12.

[Protocol Download](#)

- Western Blot (Transfected lysate)

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

Lane 1: COX4I2 transfected lysate (Predicted MW: 20 KDa).

Lane 2: Non-transfected lysate.

[Protocol Download](#)

- Western Blot (Recombinant protein)

[Protocol Download](#)

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

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

[Protocol Download](#)

- Immunoprecipitation

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

[Protocol Download](#)

- Sandwich ELISA (Recombinant protein)

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

[Protocol Download](#)

- ELISA

Gene Info — COX4I2

Entrez GeneID

[84701](#)

GeneBank Accession#	NM_032609
Protein Accession#	NP_115998
Gene Name	COX4L2
Gene Alias	COX4, COX4-2, COX4B, COX4L2, COXIV-2, dJ857M17.2
Gene Description	cytochrome c oxidase subunit IV isoform 2 (lung)
Omim ID	607976
Gene Ontology	Hyperlink
Gene Summary	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. [provided by RefSeq]
Other Designations	OTTHUMP00000030533 cytochrome c oxidase subunit IV isoform 2 cytochrome c oxidase subunit IV-like 2

Publication Reference

- [Upregulation of COX4-2 via HIF-1 \$\alpha\$ in Mitochondrial COX4-1 Deficiency.](#)

Liza Douiev, Chaya Miller, Shmuel Ruppo, Hadar Benyamini, Bassam Abu-Libdeh, Ann Saada.

Cells 2021 Feb; 10(2):452.

Application: IF, Human, Human foreskin fibroblasts

- [Cytochrome c Oxidase Subunit 4 Isoform Exchange Results in Modulation of Oxygen Affinity.](#)

Pajuelo Reguera D, Čunátová K, Vrbacký M, Pecinová A, Houštěk J, Mráček T, Pecina P.

Cells 2020 Feb; 9(2):E443.

Application: WB, Human, HEK 293 cell

- [The cellular stress proteins CHCHD10 and MNRR1 \(CHCHD2\): Partners in mitochondrial and nuclear function and dysfunction.](#)

Purandare N, Somayajulu M, Hüttemann M, Grossman LI, Aras S.

The Journal of Biological Chemistry 2018 Apr; 293(17):6517.

Application: Immunoblotting, Human, HEK 293, Hela cells

- [Control of human energy expenditure by cytochrome c oxidase subunit IV-2.](#)

Schiffer TA, Peleli M, Sundqvist ML, Ekblom B, Lundberg JO, Weitzberg E, Larsen FJ.

American Journal of Physiology. Cell Physiology 2016 Jul; 311(3):C452.

Application: WB, Human, Muscle tissue and human primary myotubes

- [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 Research 2013 Jan; 41(4):2255.

Application: WB, Rat, Rat primary lung cell

- [Cytochrome c oxidase subunit 4 isoform 2-knockout mice show reduced enzyme activity, airway hyporeactivity, and lung pathology.](#)

Hüttemann 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, Höfler H, Adamski J, Bekerredjian R, Graw J, Adler T, Busch DH, Klingenspor M, Klopstock T, Ollert M, Wolf E, Fuchs H, Gailus-Durner V, Hrabě de Angelis M, Weissmann N, Doan JW, Bassett DJ, Grossman LI.

FASEB Journal 2012 Sep; 26(9):3916.

Application: WB-Ti, Bovine, Mouse, Heart, Liver, Lung

- [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 May; 89:2068.

Application: WB-Ce, WB-Ti, Human, Astrocytes, Cortex

- [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 and Tissue Research 2010 Jul; 341(1):83.

Application: WB, Mouse, Mouse astrocytes

- [Brain region specificity of 3-nitropropionic acid-induced vulnerability of neurons involves cytochrome c oxidase.](#)

Singh S, Misiak M, Beyer C, Arnold S.

Neurochemistry International 2010 Oct; 57(3):297.

Application: WB, Mouse, Primary neurons were prepared from striatum and cortex of BALB/c mouse brains

Pathway

- [Cardiac muscle contraction](#)
- [Metabolic pathways](#)
- [Oxidative phosphorylation](#)

Disease

- [Genetic Predisposition to Disease](#)
- [Prostatic Neoplasms](#)