

Rabbit anti-Mouse, Rat Cox6a2 Polyclonal Antibody | anti-Cox6a2 antibody

Anti-Cox6a2 Antibody

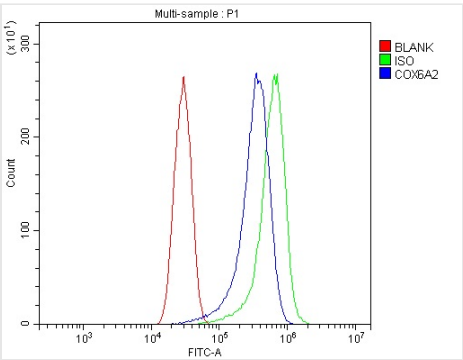
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA125823	Rabbit	Mouse, Rat	Flow Cytometry, Functional Assay, Western Blot

PRODUCT SYNONYMS

Cox6a2; Polyclonal Antibody; Anti-Cox6a2 Antibody; Cytochrome c oxidase subunit 6A2; mitochondrial; Cytochrome c oxidase polypeptide VIa-heart; COXVIAH; cytochrome c oxidase subunit 6A2; anti-Cox6a2 antibody

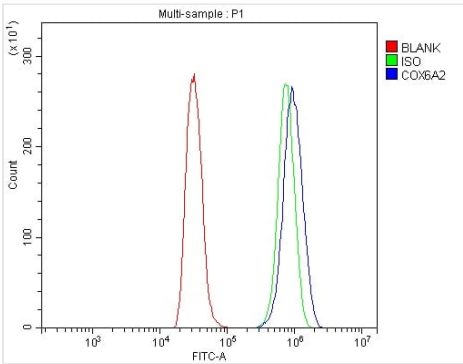
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for Cox6a2 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Applicable Applications for anti-Cox6a2 antibody	FCM/FACS (Flow Cytometry), WB (Western Blot)
Immunogen	A synthetic peptide corresponding to a sequence of mouse Cox6a2 (WMHAGHHERPEFIPYHHLR).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



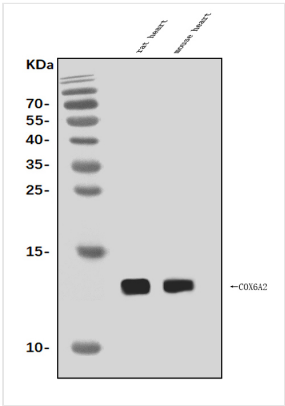
FCM/FACS (Flow Cytometry)

Figure 3. Flow Cytometry analysis of HEPA1-6 cells using anti-Cox6a2 antibody (AAA125823).Overlay histogram showing HEPA1-6 cells stained with AAA125823 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Cox6a2 Antibody (AAA125823, 1μg/1x10⁶ cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



FCM/FACS (Flow Cytometry)

Figure 2. Flow Cytometry analysis of NRK cells using anti-Cox6a2 antibody (AAA125823).Overlay histogram showing NRK cells stained with AAA125823 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Cox6a2 Antibody (AAA125823, 1μg/1x10⁶ cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



WB (Western Blot)

Figure 1. Western blot analysis of Cox6a2 using anti-Cox6a2 antibody (AAA125823).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30ug of sample under reducing conditions.Lane 1: rat heart tissue lysatesLane 2: mouse heart tissue lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-Cox6a2 antigen affinity purified polyclonal antibody (Catalog # AAA125823) at 0. 5 μg/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Cox6a2 at approximately 11KD. The expected band size for Cox6a2 is at 11KD.

ADDITIONAL INFORMATION

Related Product Information for anti-Cox6a2 antibody

Cytochrome c oxidase subunit VIa polypeptide 2 is a protein that in humans is encoded by the COX6A2 gene. 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 polypeptide 2 (heart/muscle isoform) of subunit VIa, and polypeptide 2 is present only in striated muscles. Polypeptide 1 (liver isoform) of subunit VIa is encoded by a different gene, and is found in all non-muscle tissues. These two polypeptides share 66% amino acid sequence identity.

References	1. Bachman, N. J., Riggs, P. K., Siddiqui, N., Makris, G. J., Womack, J. E., Lomax, M. I. Structure of the human gene (COX6A2) for the heart/muscle isoform of cytochrome c oxidase subunit VIa and its chromosomal location in humans, mice, and cattle. <i>Genomics</i> 42: 146-151, 1997. 2. Inoue, M., Uchino, S., Iida, A., Noguchi, S., Hayashi, S., Takahashi, T., Fujii, K., Komaki, H., Takeshita, E., Nonaka, I., Okada, Y., Yoshizawa, T., Van Lommel, L., Schuit, F., Goto, Y., Mimaki, M., Nishino, I. COX6A2 variants cause a muscle-specific cytochrome c oxidase deficiency. <i>Ann. Neurol.</i> 86: 193-202, 2019. 3. Quintens, R., Singh, S., Lemaire, K., De Bock, K., Granvik, M., Schraenen, A., Vroegrijk, I. O. C. M., Costa, V., Van Noten, P., Lambrechts, D., Lehnert, S., Van Lommel, L., and 10 others. Mice deficient in the respiratory chain gene Cox6a2 are protected against high-fat diet-induced obesity and insulin resistance. <i>PLoS One</i> 8: e56719, 2013. Note: Electronic Article.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	83816956
NCBI GeneID	12862
NCBI Accession #	NP_034073.2
NCBI GenBank Nucleotide #	NM_009943.2
UniProt Accession #	P43023
Molecular Weight	10,749 Da
NCBI Official Full Name	cytochrome c oxidase subunit 6A2, mitochondrial
NCBI Official Synonym Full Names	cytochrome c oxidase subunit VIa polypeptide 2
NCBI Official Symbol	Cox6a2
NCBI Official Synonym Symbols	VlaH; CoxVlaH
NCBI Protein Information	cytochrome c oxidase subunit 6A2, mitochondrial
UniProt Protein Name	Cytochrome c oxidase subunit 6A2, mitochondrial
UniProt Gene Name	Cox6a2
UniProt Synonym Gene Names	COXVIAH
UniProt Entry Name	CX6A2_MOUSE

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.