SANTA CRUZ BIOTECHNOLOGY, INC.

# COX7a2L (K-13): sc-167537

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

The cytochrome c oxidase (COX) family of proteins function as the final electron donor in the respiratory chain to drive a proton gradient across the inner mitochondrial membrane, ultimately resulting in the production of water. The mammalian COX apoenzyme is a dimer, with each monomer consisting of 13 subunits, some of which are mitochondrial and some of which are nuclear. COX7a2 (cytochrome c oxidase subunit VIIa polypeptide 2), also known as COX7AL or COX7AL1, is an 83 amino acid protein that localizes to the inner mitochondrial membrane and exists as a component of the COX complex, playing an important role in electron transport. COX7a2L (cytochrome c oxidase subunit 7A-related protein), also known as COX7AR or COX7RP, is an inner mitochondrial membrane protein that consists of 114 amino acids and is induced by estrogen.

## REFERENCES


1. Fabrizi, G.M., et al. 1989. Sequence of a cDNA specifying subunit VIIa of human cytochrome c oxidase. Nucleic Acids Res. 17: 7107.
2. Arnaudo, E., et al. 1992. Tissue-specific expression and chromosome assignment of genes specifying two isoforms of subunit VIIa of human cytochrome c oxidase. Gene 119: 299-305.
3. Taanman, J.W., et al. 1993. Tissue distribution of cytochrome c oxidase isoforms in mammals. Characterization with monoclonal and polyclonal antibodies. Biochim. Biophys. Acta 1225: 95-100.
4. Merante, F., et al. 1997. Chromosomal localization of the human liver form cytochrome c oxidase subunit VIIa gene. Genome 40: 318-324.
5. Merante, F., et al. 1997. Cloning, characterization, and chromosomal localization of human liver form cytochrome c oxidase subunit VIa related genes. Genome 40: 325-331.
6. Lenka, N., et al. 1998. Structural organization and transcription regulation of nuclear genes encoding the mammalian cytochrome c oxidase complex. Prog. Nucleic Acid Res. Mol. Biol. 61: 309-344.
7. Hüttemann, M., et al. 2000. Isolation and sequence of the human cytochrome c oxidase subunit VIIaL gene. Biochim. Biophys. Acta 1492: 252-258.


## CHROMOSOMAL LOCATION

Genetic locus: COX7A2L (human) mapping to 2p21; Cox7a2l (mouse) mapping to 17 E4.

## SOURCE

COX7a2L (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of COX7a2L of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167537 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

COX7a2L (K-13) is recommended for detection of COX7a2L of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other COX7a family members.

COX7a2L (K-13) is also recommended for detection of COX7a2L in additional species, including equine, canine and porcine.

Suitable for use as control antibody for COX7a2L siRNA (h): sc-94637, COX7a2L siRNA (m): sc-142532, COX7a2L shRNA Plasmid (h): sc-94637-SH, COX7a2L shRNA Plasmid (m): sc-142532-SH, COX7a2L shRNA (h) Lentiviral Particles: sc-94637-V and COX7a2L shRNA (m) Lentiviral Particles: sc-142532-V.

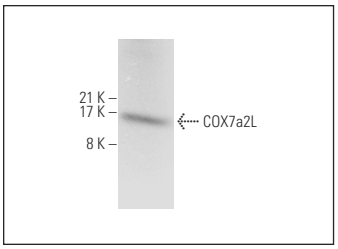
Molecular Weight of COX7a2L: 13 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA




COX7a2L (K-13): sc-167537. Western blot analysis of COX7a2L expression in NIH/3T3 whole cell lysate.

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.