SANTA CRUZ BIOTECHNOLOGY, INC.

COQ10B (Y-13): sc-65063

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

COQ10B, coenzyme Q_{10}, is a 247 amino acid protein encoded by the human gene COQ10B. COQ10B is a mitochondrial protein that belongs to the COQ_{10} family. COQ10B is an essential biological cofactor which increases brain mitochondrial concentration and exerts neuroprotective effects. Plasma COQ10B levels decrease in patients with advanced chronic heart failure (CHF) while COQ10B levels in hyperthyroid patients are found among the lowest detected in human diseases. Likewise, COQ10B is elevated in hypothyroid subjects, also in subclinical conditions, suggesting the usefulness of this index in assessing metabolic status in thyroid disorders. It is believed that secretion of adrenal hormones is in some way related to COQ10B levels, both in augmented and reduced conditions. However, since thyroid hormones have an important role in modulating COQ10B levels and metabolism, when coexistent, thyroid deficiency seems to play a prevalent role in comparison with adrenal deficiency.

REFERENCES

1. Sander, S., et al. 2006. The impact of coenzyme Q_{10} on systolic function in patients with chronic heart failure. J. Card. Fail. 12: 464-472.
2. Niklowitz, P., et al. 2006. Coenzyme Q_{10} in maternal plasma and milk throughout early lactation. Biofactors 25: 67-72.
3. Li, G., et al. 2006. Coenzyme Q_{10} protects SHSY5Y neuronal cells from β-Amyloid toxicity and oxygen-glucose deprivation by inhibiting the opening of the mitochondrial permeability transition pore. Biofactors 25: 97-107.
4. Mancini, A., et al. 2006. Coenzyme Q_{10} evaluation in pituitary-adrenal axis disease: preliminary data. Biofactors 25: 197-199.
5. Mancini, A., et al. 2006. Relationships between plasma CoQ10 levels and thyroid hormones in chronic obstructive pulmonary disease. Biofactors 25: 201-204.
6. Sekine, K., et al. 2006. Estimation of plasma and saliva levels of coenzyme Q_{10} and influence of oral supplementation. Biofactors 25: 205-211.
7. Belardinelli, R., et al. 2006. Coenzyme Q_{10} and exercise training in chronic heart failure. Eur. Heart J. 27: 2675-2681.

CHROMOSOMAL LOCATION

Genetic locus: COQ10B (human) mapping to 2q33.1; Coq10b (mouse) mapping to 1 C1.2.

SOURCE

COQ10B (Y-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of COQ10B 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-65063 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COQ10B (Y-13) is recommended for detection of COQ10B 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).

COQ10B (Y-13) is also recommended for detection of COQ10B in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for COQ10B siRNA (h): sc-62142, COQ10B siRNA (m): sc-62143, COQ10B shRNA Plasmid (h): sc-62142-SH, COQ10B shRNA Plasmid (m): sc-62143-SH, COQ10B shRNA (h) Lentiviral Particles: sc-62142-V and COQ10B shRNA (m) Lentiviral Particles: sc-62143-V.

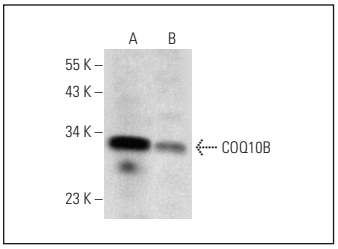
Molecular Weight of COQ10B: 27 kDa.

Positive Controls: mouse brain extract: sc-2253 or HeLa whole cell lysate: sc-2200.

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



COQ10B (Y-13): sc-65063. Western blot analysis of COQ10B expression in mouse brain tissue extract (**A**) and HeLa whole cell lysate (**B**).

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.