SANTA CRUZ BIOTECHNOLOGY, INC.

ATP5L (C-14): sc-86077

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mitochondrial ATP synthase is composed of two multi-subunit complexes that utilize an inner membrane electrochemical gradient to catalyze the synthesis of ATP during oxidative phosphorylation. The two multi-subunit complexes are designated F1 and F0, the former of which comprises the soluble catalytic core and the latter of which comprises the membrane-spanning proton channel of ATP synthase. F1 consists of five distinct subunits, designated ATP5A, ATP5B, ATP5C1, ATP5D and ATP5E, while F0 consists of ten subunits, designated ATP5H, ATP5G1, ATP5I, ATP5G2, ATP5J2, ATP5J, ATP5G3, ATP5S, ATP5F1 and ATP5L. ATP5L, also known as ATP5JG, is a 103 amino acid protein that localizes to the mitochondrial membrane and exists as a subunit of the F0 complex.

REFERENCES

1. Elston, T., Wang, H. and Oster, G. 1998. Energy transduction in ATP synthase. Nature 391: 510-513.
2. Wang, H. and Oster, G. 1998. Energy transduction in the F1 motor of ATP synthase. Nature 396: 279-282.
3. Aggeler, R., Coons, J., Taylor, S.W., Ghosh, S.S., Garcia, J.J., Capaldi, R.A. and Marusich, M.F. 2002. A functionally active human F1F0 ATPase can be purified by immunocapture from heart tissue and fibroblast cell lines. Subunit structure and activity studies. J. Biol. Chem. 277: 33906-33912.
4. Leyva, J.A., Bianchet, M.A. and Amzel, L.M. 2003. Understanding ATP synthesis: structure and mechanism of the F1-ATPase. Mol. Membr. Biol. 20: 27-33.
5. Oster, G. and Wang, H. 2003. Rotary protein motors. Trends Cell Biol. 13: 114-121.
6. Cross, R.L. 2004. Molecular motors: turning the ATP motor. Nature 427: 407-408.

CHROMOSOMAL LOCATION

Genetic locus: ATP5L (human) mapping to 11q23.3, ATP5L2 (human) mapping to 22q13.33.

SOURCE

ATP5L (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ATP5L2 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-86077 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ATP5L (C-14) is recommended for detection of ATP5L and ATP5L2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 ATP5 family members.

Molecular Weight of ATP5L: 11 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.