SANTA CRUZ BIOTECHNOLOGY, INC.

ATP11 (yN-14): sc-31707

The Power to Question

BACKGROUND

ATP11 (also designated Atp11p) is a nuclear gene product that is required for assembly of mitochondrial F1-ATPase and is essential for the assembly of the F1-F0 complex in yeast. ATP11 is synthesized in the yeast cytoplasm with an N-terminal targeting sequence. Following import into mitochondria, the leader sequence is cleaved, generating the functional form of the protein. ATP11 may interact with the alpha and beta subunits of F1-ATPase. The active domain of ATP11 is between Phe1 20 and Asn 174. The domains proximal (Glu 40 through Ser 109) and distal (Arg 183 through Asn 318) to the active region are important for the protein stability inside mitochondria. Human ATP11 spans 24 kilobase pairs in nine exons and maps to 1p32.3-p33.

REFERENCES

1. Ackerman, S.H. and Tzagoloff, A. 1990. Identification of two nuclear genes (ATP11, ATP12) required for assembly of the yeast F1-ATPase. Proc. Natl. Acad. Sci. USA 87: 4986-4990.
2. Ackerman, S.H., Martin, J. and Tzagoloff, A. 1992. Characterization of ATP11 and detection of the encoded protein in mitochondria of *Saccharomyces cerevisiae*. J. Biol. Chem. 267: 7386-7394.
3. White, M., and Ackerman, S.H. 1995. Bacterial production and characterization of ATP11, a yeast protein required for mitochondrial F1-ATPase assembly. Arch. Biochem. Biophys. 319: 299-304.
4. Wang, Z.G. and Ackerman, S.H. 1996. Identification of functional domains in ATP11. Protein required for assembly of the mitochondrial F1-ATPase in yeast. J. Biol. Chem. 271: 4887-4894.
5. Wang, Z.G., White, P.S. and Ackerman, S.H. 2001. ATP11 and ATP12 are assembly factors for the F1-ATPase in human mitochondria. J. Biol. Chem. 276: 30773-30778.

SOURCE

ATP11 (yN-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ATP11 of *Saccharomyces cerevisiae* 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-31707 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

STORAGE

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

PROTOCOLS

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

APPLICATIONS

ATP11 (yN-14) is recommended for detection of ATP11 of *Saccharomyces cerevisiae* 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).

Molecular Weight of ATP11: 37 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.