

ATP5E (C-19): sc-49166

BACKGROUND

Mitochondrial ATP synthases (ATPases) transduce the energy contained in membrane electrochemical proton gradients into the energy required for synthesis of high-energy phosphate bonds. ATPases contain two linked complexes: F_1 , the hydrophilic catalytic core; and F_0 , the membrane-embedded protein channel. F_1 consists of three α chains and three β chains, which are weakly homologous, as well as one γ chain, one δ chain and one ϵ chain. F_0 consists of three subunits: a, b and c. The ϵ chain of F_1 contains 50 amino acids and is the smallest of the 5 ATPase F_1 chains. Mitochondrial ATPase ϵ chain (ATP5E) localizes to the mitochondria and catalyzes ATP synthesis.

REFERENCES

1. Walker, J.E., et al. 1985. Primary structure and subunit stoichiometry of F_1 -ATPase from bovine mitochondria. *J. Mol. Biol.* 184: 677-701.
2. Shirakihara, Y., et al. 1997. The crystal structure of the nucleotide-free α_3/β_3 subcomplex of F_1 -ATPase from the thermophilic *Bacillus* PS3 is a symmetric trimer. *Structure* 5: 825-836.
3. Tu, Q., et al. 2000. Cloning, characterization and mapping of the human ATP5E gene, identification of pseudogene ATP5EP1 and definition of the ATP5E motif. *Biochem. J.* 347: 17-21.
4. Gross, C., et al. 2000. ϵ subunit gene of F_1/F_0 -ATP synthase (ATP5E) on human chromosome 20q13.2→q13.3 localizes between D20S171 and GNAS1. *Cytogenet. Cell Genet.* 91: 105-106.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606153. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: ATP5E (human) mapping to 20q13.32; Atp5e (mouse) mapping to 2 H4.

SOURCE

ATP5E (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ATP5E of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-49166 P, (100 μ g 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.

PROTOCOLS

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

APPLICATIONS

ATP5E (C-19) is recommended for detection of ATP5E of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

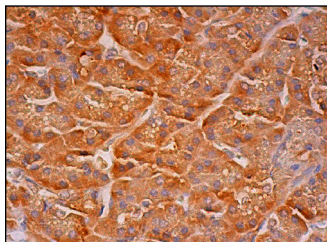
ATP5E (C-19) is also recommended for detection of ATP5E in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for ATP5E siRNA (h): sc-60229, ATP5E siRNA (m): sc-60230, ATP5E shRNA Plasmid (h): sc-60229-SH, ATP5E shRNA Plasmid (m): sc-60230-SH, ATP5E shRNA (h) Lentiviral Particles: sc-60229-V and ATP5E shRNA (m) Lentiviral Particles: sc-60230-V.

Molecular Weight of ATP5E: 7 kDa.

Positive Controls: SW-13 cell lysate: sc-24778 or HeLa whole cell lysate: sc-2200.

DATA



ATP5E (C-19): sc-49166. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells.

RESEARCH USE

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

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Satisfaction
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Try **ATP5E (A-11): sc-393695** or **ATP5E (A-12): sc-393696**, our highly recommended monoclonal alternatives to ATP5E (C-19).