SANTA CRUZ BIOTECHNOLOGY, INC.

ATP5H (E-1): sc-515915

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ATP5H (ATP synthase, H^+ transporting, mitochondrial F0 complex, subunit d), also known as ATPQ, is a 161 amino acid protein that belongs to the ATPase d subunit family. F-type ATPases, such as ATP5H, consist of two linked components: CF1, a soluble catalytic core that consists of five different subunits (α, β, γ, δ and ε), and CF0, a membrane proton channel that contains a, b, c, OSCP, d, F6, e, f, g and AL6 subunits. ATP5H encodes the d subunit of the F0 complex. ATP5H produces ATP from ADP in the presence of a proton gradient across the membrane, which is generated by electron transport complexes of the respiratory chain. Localizing to mitochondrial inner membrane, ATP5H exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 17q25.1. ATP5H also has three pseudogenes, which are located on chromosomes 9, 12 and 15.

REFERENCES

1. Toda, S., et al. 2002. Repeated cocaine administration alters the expression of genes in corticolimbic circuitry after a 3-week withdrawal: a DNA macroarray study. J. Neurochem. 82: 1290-1299.
2. Rosenberg, M.J., et al. 2002. Mutant deoxynucleotide carrier is associated with congenital microcephaly. Nat. Genet. 32: 175-179.
3. Jervis, K.M. and Robaire, B. 2003. Effects of caloric restriction on gene expression along the epididymis of the Brown Norway rat during aging. Exp. Gerontol. 38: 549-560.
4. Noh, H.S., et al. 2004. A cDNA microarray analysis of gene expression profiles in rat hippocampus following a ketogenic diet. Brain Res. Mol. Brain Res. 129: 80-87.
5. Skov, V., et al. 2007. Reduced expression of nuclear-encoded genes involved in mitochondrial oxidative metabolism in skeletal muscle of Insulin-resistant women with polycystic ovary syndrome. Diabetes 56: 2349-2355.

CHROMOSOMAL LOCATION

Genetic locus: ATP5H (human) mapping to 17q25.1.

SOURCE

ATP5H (E-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 125-146 near the C-terminus of ATP5H of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ATP5H (E-1) is available conjugated to agarose (sc-515915 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515915 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515915 PE), fluorescein (sc-515915 FITC), Alexa Fluor® 488 (sc-515915 AF488), Alexa Fluor® 546 (sc-515915 AF546), Alexa Fluor® 594 (sc-515915 AF594) or Alexa Fluor® 647 (sc-515915 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515915 AF680) or Alexa Fluor® 790 (sc-515915 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ATP5H (E-1) is recommended for detection of ATP5H isoforms 1 and 2 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for ATP5H siRNA (h): sc-93691, ATP5H shRNA Plasmid (h): sc-93691-SH and ATP5H shRNA (h) Lentiviral Particles: sc-93691-V.

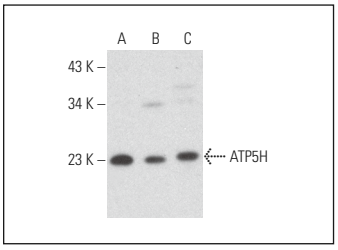
Molecular Weight of ATP5H isoforms 1/2: 18/16 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or human liver extract: sc-363766.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ATP5H (E-1): sc-515915. Western blot analysis of ATP5H expression in Jurkat (**A**) and Hep G2 (**B**) whole cell lysates and human liver tissue extract (**C**).

SELECT PRODUCT CITATIONS

1. Kobayashi, T., et al. 2020. Enhanced malignant phenotypes of glioblastoma cells surviving NPe6-mediated photodynamic therapy are regulated via ERK1/2 activation. Cancers 12: 3641.

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.