SANTA CRUZ BIOTECHNOLOGY, INC.

OSCP (4C11): sc-65241

BACKGROUND

Oligomycin sensitivity conferring protein (OSCP), also designated ATP5O, is the O subunit of ATP synthase which localizes to the mitochondria and catalyzes ATP synthesis. 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 five ATPase F1 chains.

REFERENCES

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6. Mao, Y., et al. 1997. Structural interactions of the oligomycin sensitivity conferring protein in the yeast ATP synthase. Arch. Biochem. Biophys. 337: 8-16.
7. Joshi, S., et al. 1997. Oligomycin sensitivity conferring protein (OSCP) of bovine heart mitochondrial ATP synthase: high-affinity OSCP-F_0 interactions require a local α-helix at the C-terminal end of the subunit. Biochemistry 36: 10936-10943.
8. Golden, T.R., et al. 1998. The oligomycin sensitivity conferring protein of rat liver mitochondrial ATP synthase: Arginine 94 is important for the binding of OSCP to F_1. Biochemistry 37: 13871-13881.
9. Zheng, J., et al. 1999. Purification and identification of an estrogen binding protein from rat brain: oligomycin sensitivity conferring protein (OSCP), a subunit of mitochondrial F_0 F_1-ATP synthase/ATPase. J. Steroid Biochem. Mol. Biol. 68: 65-75.

CHROMOSOMAL LOCATION

Genetic locus: ATP5O (human) mapping to 21q22.11.

SOURCE

OSCP (4C11) is a mouse monoclonal antibody raised against recombinant OSCP of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

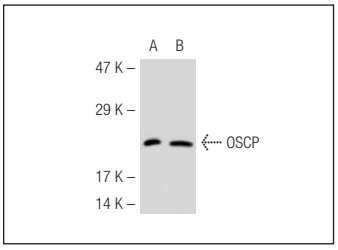
OSCP (4C11) is recommended for detection of OSCP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for OSCP siRNA (h): sc-62452, OSCP shRNA Plasmid (h): sc-62452-SH and OSCP shRNA (h) Lentiviral Particles: sc-62452-V.

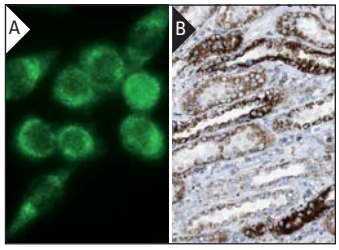
Molecular Weight of OSCP: 23 kDa.

Positive Controls: human heart tissue extract, OSCP1 (h): 293T Lysate: sc-171698 or HeLa whole cell lysate: sc-2200.

DATA



OSCP (4C11): sc-65241. Western blot analysis of OSCP expression in 293T (**A**) and HeLa (**B**) whole cell lysate.



OSCP (4C11): sc-65241. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli and cells in tubules. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**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.

PROTOCOLS

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