

# ATPIF1 (G-13): sc-162557

## 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  $\alpha$  chains and three  $\beta$  chains, which are weakly homologous, as well as one  $\gamma$  chain, one  $\delta$  chain and one  $\epsilon$  chain.  $F_0$  consists of three subunits: a, b and c. A mitochondrial  $F_1$ -ATPase inhibitor protein, ATPIF<sub>1</sub> (ATPase inhibitory factor 1), also known as IP, IF<sub>1</sub>, ATPI or ATPIP (ATPase inhibitor protein), binds to the C-terminal region of a  $\beta$  subunit of the  $F_1$ -ATPase at low pH values and, via interference of the  $\beta$  and  $\gamma$  subunit interaction, ATPIF1 regulates the activity of the  $F_1F_0$ -ATPase. This reversible ATPIF1 binding to  $F_1F_0$ -ATPase also occurs on the surface of endothelial cells.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: ATPIF1 (human) mapping to 1p35.3.

## SOURCE

ATPIF1 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ATPIF1 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-162557 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ATPIF1 (G-13) is recommended for detection of ATPIF1 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).

Suitable for use as control antibody for ATPIF1 siRNA (h): sc-78711, ATPIF1 shRNA Plasmid (h): sc-78711-SH and ATPIF1 shRNA (h) Lentiviral Particles: sc-78711-V.

Molecular Weight of ATPIF1: 12 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

## 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **ATPIF1 (A-3): sc-271614**, our highly recommended monoclonal alternative to ATPIF1 (G-13).