

ATAD3A/B/C (C-16): sc-104091

BACKGROUND

The AAA ATPase family of molecular chaperones are characterized by a highly conserved AAA motif. Composed of 200-250 residues, the AAA domain contains Walker homology sequences and imparts ATPase activity. Members of the AAA ATPase family act as DNA helicases as well as transcription factors and are thought to be involved in several cellular functions such as cell-cycle regulation, protein proteolysis, organelle biogenesis and vesicle-mediated protein transport. Mitochondrial membrane proteins ATAD3A and ATAD3B contribute to the stabilization of nucleoids which are large mitochondrial DNA (mtDNA)-protein complexes. ATAD3A/B may participate in the transformation pathway and the chemosensitivity of oligodendrogliomas. The gene encoding ATAD3A/B/C maps to human chromosome 1, which houses over 3,000 genes and is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome.

REFERENCES

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8. He, J., et al. 2007. The AAA⁺ protein ATAD3 has displacement loop binding properties and is involved in mitochondrial nucleoid organization. *J. Cell Biol.* 176: 141-146.
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CHROMOSOMAL LOCATION

Genetic locus: ATAD3A/ATAD3B/ATAD3C (human) mapping to 1p36.33; Atad3a (mouse) mapping to 4 E2.

SOURCE

ATAD3A/B/C (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ATAD3A of human 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-104091 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ATAD3A/B/C (C-16) is recommended for detection of ATAD3A, ATAD3B and ATAD3C of human origin and ATAD3A of mouse and rat 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); non cross-reactive with other ATAD family members.

ATAD3A/B/C (C-16) is also recommended for detection of ATAD3A, ATAD3B and ATAD3C in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for ATAD3A siRNA (m): sc-105102, ATAD3A shRNA Plasmid (m): sc-105102-SH and ATAD3A shRNA (m) Lentiviral Particles: sc-105102-V.

Molecular Weight of ATAD3A: 71 kDa.

Molecular Weight of ATAD3B: 73 kDa.

Molecular Weight of ATAD3C: 46 kDa.

Molecular Weight of mouse ATAD3A isoforms: 67/57 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.

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.



Try **ATAD3A/B/C (A-4): sc-376185**, our highly recommended monoclonal alternative to ATAD3A/B/C (C-16).