

ANT2 (F-7): sc-518109

BACKGROUND

ANT2 (adenine nucleotide translocator 2), also known as SLC25A5 (solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), member 5), T2, T3, 2F1 or AAC2, is a 298 amino acid multi-pass membrane protein that localizes to the inner mitochondrial membrane and contains three solcar repeats. Existing as one of the most abundant mitochondrial proteins, ANT2 functions as a homodimer that facilitates the exchange of ADP and ATP between the mitochondrion and the cytosol, thus linking the compartment of ATP production (within the mitochondrion) to the areas of ATP utilization (within the cytosol). Suppression of ANT2 in breast cancer cells results in apoptosis and tumor growth inhibition, suggesting that ANT2 may be involved in carcinogenesis. ANT3 (adenine nucleotide translocator 2) is a 298 amino acid mitochondrial protein that functions in a similar manner to ANT2 but, unlike ANT2, may also play a role in the formation of the permeability transition pore complex (PTPC), a structure that is important for the regulation of apoptosis.

REFERENCES

1. Chen, S.T., Chang, C.D., Huebner, K., Ku, D.H., McFarland, M., DeRiel, J.K., Baserga, R. and Wurzel, J. 1990. A human ADP/ATP translocase gene has seven pseudogenes and localizes to chromosome X. *Somat. Cell Mol. Genet.* 16: 143-149.
2. De Marcos Lousa, C., Trezeguet, V., Dianoux, A.C., Brandolin, G. and Lauquin, G.J. 2002. The human mitochondrial ADP/ATP carriers: kinetic properties and biogenesis of wild-type and mutant proteins in the yeast *S. cerevisiae*. *Biochemistry* 41: 14412-14420.
3. Luciakova, K., Barath, P., Poliakova, D., Persson, A. and Nelson, B.D. 2003. Repression of the human adenine nucleotide translocase-2 gene in growth-arrested human diploid cells: the role of nuclear factor-1. *J. Biol. Chem.* 278: 30624-30633.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A5 (human) mapping to Xq24.

SOURCE

ANT2 (F-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 159-178 within an internal region of ANT2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ANT2 (F-7) is available conjugated to agarose (sc-518109 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518109 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518109 PE), fluorescein (sc-518109 FITC), Alexa Fluor[®] 488 (sc-518109 AF488), Alexa Fluor[®] 546 (sc-518109 AF546), Alexa Fluor[®] 594 (sc-518109 AF594) or Alexa Fluor[®] 647 (sc-518109 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518109 AF680) or Alexa Fluor[®] 790 (sc-518109 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ANT2 (F-7) is recommended for detection of ANT2 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 ANT2 siRNA (h): sc-72505, ANT2 shRNA Plasmid (h): sc-72505-SH and ANT2 shRNA (h) Lentiviral Particles: sc-72505-V.

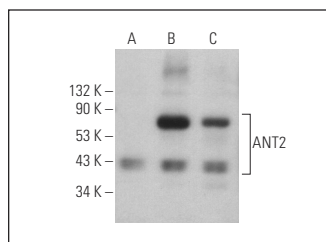
Molecular Weight of ANT2: 33 kDa.

Positive Controls: ANT2 (h): 293T Lysate: sc-116578.

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



ANT2 (F-7): sc-518109. Western blot analysis of ANT2 expression in non-transfected: sc-117752 (A), human ANT2 transfected: sc-116578 (B) and mouse ANT2 sc-118440 (C) 293T whole cell lysates. Detection reagent used: m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM.

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 for detailed protocols and support products.

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