

AHNAK (1G11): sc-134252

BACKGROUND

AHNAK (neuroblast differentiation-associated protein AHNAK, desmoyokin) is a 5,890 amino acid protein encoded by the human gene AHNAK. The intronless AHNAK gene is located on human chromosome 11q12.3 and has three main structural regions: the 251 amino acid N-terminus, a large central region of 4,390 amino acids with multiple repeated units of about 128 amino acids in length, and the 1,002 amino acid C-terminus. The central region seems to have antiparallel β -strands connected by intervening loops. Several putative regulatory elements are clustered within the C-terminal region, including nuclear export localization signals, a leucine zipper, and potential phosphorylation sites for Akt1 and PKC. AHNAK is believed to be an important signalling molecule involved in a wide range of physiological activities and may be required for neuronal cell differentiation. AHNAK also appears to influence β -adrenergic regulation of cardiac L-type Ca^{2+} channel function.

REFERENCES

1. von Boxberg, Y., et al. 2006. Spinal cord injury-induced upregulation of AHNAK, expressed in cells delineating cystic cavities, and associated with neoangiogenesis. *Eur. J. Neurosci.* 24: 1031-1041.
2. De Seranno, S., et al. 2006. Identification of an AHNAK binding motif specific for the Annexin2/S100A10 tetramer. *J. Biol. Chem.* 281: 35030-35038.
3. Haase, H. 2006. AHNAK, a new player in β -adrenergic regulation of the cardiac L-type Ca^{2+} channel. *Cardiovasc. Res.* 73: 19-25.
4. Huang, Y., et al. 2007. AHNAK, a novel component of the dysferlin protein complex, redistributes to the cytoplasm with dysferlin during skeletal muscle regeneration. *FASEB J.* 21: 732-742.
5. Wu, E.H., et al. 2007. Effect of hypoxia on the gene profile of human bone marrow-derived mesenchymal stem cells. *Sheng Li Xue Bao* 59: 227-232.
6. Cocucci, E., et al. 2007. Enlargeosome traffic: exocytosis triggered by various signals is followed by endocytosis, membrane shedding or both. *Traffic* 8: 742-757.
7. Lee, I.H., et al. 2008. AHNAK protein activates PKC through dissociation of PKC-PP2A complex. *J. Biol. Chem.* 283: 6312-6320.

CHROMOSOMAL LOCATION

Genetic locus: AHNAK (human) mapping to 11q12.3; Ahnak (mouse) mapping to 19 A.

SOURCE

AHNAK (1G11) is a mouse monoclonal antibody raised against recombinant AHNAK protein of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

AHNAK (1G11) is recommended for detection of AHNAK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AHNAK siRNA (h): sc-97060, AHNAK siRNA (m): sc-140916, AHNAK shRNA Plasmid (h): sc-97060-SH, AHNAK shRNA Plasmid (m): sc-140916-SH, AHNAK shRNA (h) Lentiviral Particles: sc-97060-V and AHNAK shRNA (m) Lentiviral Particles: sc-140916-V.

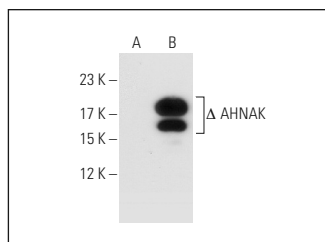
Molecular Weight of AHNAK: 630 kDa.

Positive Controls: AHNAK (h): 293T Lysate: sc-110790 or human AHNAK transfected 293T whole cell lysate.

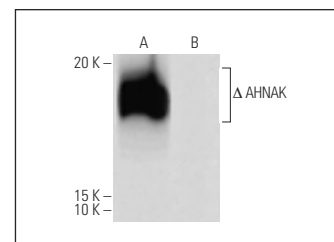
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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).

DATA



AHNAK (1G11): sc-134252. Western blot analysis of AHNAK expression in non-transfected: sc-117752 (A) and truncated human AHNAK transfected: sc-110790 (B) 293T whole cell lysates.



AHNAK (1G11): sc-134252. Western blot analysis of AHNAK expression in truncated human AHNAK transfected (A) and non-transfected (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cho, W.C., et al. 2020. SORBS1 serves a metastatic role via suppression of AHNAK in colorectal cancer cell lines. *Int. J. Oncol.* E-published.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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