

# AHNAK (H-153): sc-98373

## 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 3 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  $\beta$ -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  $\beta$ -adrenergic regulation of cardiac L-type  $Ca^{2+}$  channel function.

## REFERENCES

1. von Boxberg, Y., Salim, C., Soares, S., Baloui, H., Alterio, J., Ravaille-Veron, M. and Nothias, F. 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., Benaud, C., Assard, N., Khediri, S., Gerke, V., Baudier, J. and Delphin, C. 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  $\beta$ -adrenergic regulation of the cardiac L-type  $Ca^{2+}$  channel. *Cardiovasc. Res.* 73: 19-25.
4. Huang, Y., Laval, S.H., van Remoortere, A., Baudier, J., Benaud, C., Anderson, L.V., Straub, V., Deelder, A., Frants, R.R., den Dunnen, J.T., Bushby, K. and van der Maarel, S.M. 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., Li, H.S., Zhao, T., Fan, J.D., Ma, X., Xiong, L., Li, W.J., Zhu, L.L. and Fan, M. 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., Racchetti, G., Podini, P. and Meldolesi, J. 2007. Enlargeosome traffic: exocytosis triggered by various signals is followed by endocytosis, membrane shedding or both. *Traffic* 8: 742-757.

## CHROMOSOMAL LOCATION

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

## SOURCE

AHNAK (H-153) is a rabbit polyclonal antibody raised against amino acids 5568-5720 mapping near the C-terminus of AHNAK 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.

## APPLICATIONS

AHNAK (H-153) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

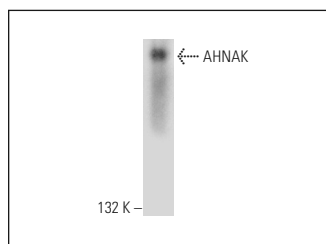
AHNAK (H-153) is also recommended for detection of AHNAK in additional species, including equine and bovine.

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.

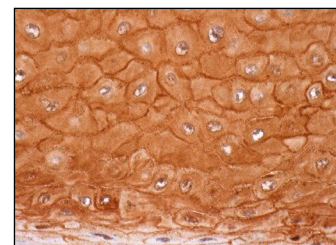
Molecular Weight of AHNAK: 630 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

## DATA



AHNAK (H-153): sc-98373. Western blot analysis of AHNAK expression in HeLa nuclear extract.



AHNAK (H-153): sc-98373. Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing membrane and cytoplasmic staining of squamous epithelial cells.

## 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.

**MONOS**  
Satisfaction  
Guaranteed

Try **AHNAK (E-5): sc-390743** or **AHNAK (1G11): sc-134252**, our highly recommended monoclonal alternatives to AHNAK (H-153).