

# ADNP (N-18): sc-49345

## BACKGROUND

Activity-dependent neuroprotector (ADNP), also designated activity-dependent neuroprotective protein, is a nuclear protein that functions as a putative transcription factor and may participate in normal growth and cancer proliferation. ADNP is a highly conserved vasoactive intestinal peptide (VIP) responsive gene that is expressed profusely in the brain (primarily cerebellum and cortex regions) and is crucial for brain formation and embryonic development. ADNP is also highly expressed in kidney, placenta, heart, skeletal muscle, breast, and colon cancer tissues. Studies indicate that neuroprotection by subpicomolar PACAP38 might be mediated partially by expression of ADNP. A correlation between brain injuries and elevated ADNP levels indicates a potential involvement of ADNP in an endogenous compensatory mechanism.

## REFERENCES

1. Gozes, I., et al. 2003. From vasoactive intestinal peptide (VIP) through activity-dependent neuroprotective protein (ADNP) to NAP: a view of neuroprotection and cell division. *J. Mol. Neurosci.* 20: 315-322.
2. Furman, S., et al. 2004. Sexual dimorphism of activity-dependent neuroprotective protein in the mouse arcuate nucleus. *Neurosci. Lett.* 373: 73-78.
3. Gozes, I., et al. 2005. The expression of activity-dependent neuroprotective protein (ADNP) is regulated by brain damage and treatment of mice with the ADNP derived peptide, NAP, reduces the severity of traumatic head injury. *Curr. Alzheimer Res.* 2: 149-153.
4. Li, M., et al. 2005. Signaling cascades involved in neuroprotection by subpicomolar pituitary adenylate cyclase-activating polypeptide 38. *J. Mol. Neurosci.* 27: 91-105.
5. Zaltzman, R., et al. 2005. The influence of the peptide NAP on Mac-1-deficient mice following closed head injury. *Peptides* 26: 1520-1527.
6. Gozes, I., et al. 2006. NAP: research and development of a peptide derived from activity-dependent neuroprotective protein (ADNP). *CNS Drug Rev.* 11: 353-368.
7. Nakamachi, T., et al. 2006. Signaling involved in pituitary adenylate cyclase-activating polypeptide-stimulated ADNP expression. *Peptides* 27: 1859-1864.
8. Sari, Y. and Gozes, I. 2006. Brain deficits associated with fetal alcohol exposure may be protected, in part, by peptides derived from activity-dependent neurotrophic factor and activity-dependent neuroprotective protein. *Brain Res. Brain Res. Rev.* 52: 107-118.

## CHROMOSOMAL LOCATION

Genetic locus: ADNP (human) mapping to 20q13.13; Adnp (mouse) mapping to 2 H3.

## SOURCE

ADNP (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ADNP of human origin.

## RESEARCH USE

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

## 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-49345 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-49345 X, 200 µg/0.1 ml.

## APPLICATIONS

ADNP (N-18) is recommended for detection of ADNP of mouse and 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).

ADNP (N-18) is also recommended for detection of ADNP in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ADNP siRNA (h): sc-60127, ADNP siRNA (m): sc-60128, ADNP shRNA Plasmid (h): sc-60127-SH, ADNP shRNA Plasmid (m): sc-60128-SH, ADNP shRNA (h) Lentiviral Particles: sc-60127-V and ADNP shRNA (m) Lentiviral Particles: sc-60128-V.

ADNP (N-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ADNP: 150 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or SK-N-MC nuclear extract: sc-2154.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.