

# Ndn (36-V): sc-101224

## BACKGROUND

Prader-Willi syndrome (PWS) is a neurogenetic disorder resulting from the loss of paternal expression of genes localized in the 15q11-q12 region. Clinical manifestations of this disease include feeding problems in infancy, temper outbursts, perseveration, obsessive-compulsive symptoms and sleep disturbances. Necdin (Ndn) protein is generated from an intronless gene that is located in the Prader-Willi syndrome deletion region. Studies in mouse suggest that the protein encoded by this gene may suppress growth in post-mitotic neurons. Ndn expression in brain is restricted to post-mitotic neurons and parental alleles display a differential methylation profile in the coding region. Reduced expression of Ndn is responsible for at least a subset of the clinical manifestations of PWS, including skin picking and improved spatial memory.

## REFERENCES

1. Watrin, F., et al. 1997. The mouse Necdin gene is expressed from the paternal allele only and lies in the 7C region of the mouse chromosome 7, a region of conserved synteny to the human Prader-Willi syndrome region. *Eur. J. Hum. Genet.* 5: 324-332.
2. Jay, P., et al. 1997. The human Necdin gene, NDN, is maternally imprinted and located in the Prader-Willi syndrome chromosomal region. *Nat. Genet.* 17: 357-361.
3. Muscatelli, F., et al. 2000. Disruption of the mouse Necdin gene results in hypothalamic and behavioral alterations reminiscent of the human Prader-Willi syndrome. *Hum. Mol. Genet.* 9: 3101-3110.
4. Oeffner, F., et al. 2001. Systematic screening for mutations in the human Necdin gene (NDN): identification of two naturally occurring polymorphisms and association analysis in body weight regulation. *Int. J. Obes. Relat. Metab. Disord.* 25: 767-779.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 602117. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. LocusLink Report (LocusID: 4692). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: NDN (human) mapping to 15q11.2.

## SOURCE

Ndn (36-V) is a mouse monoclonal antibody raised against recombinant Ndn of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

Ndn (36-V) is recommended for detection of Ndn of human origin by Western Blotting (starting dilution 1:200, 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), 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).

Suitable for use as control antibody for Ndn siRNA (h): sc-37318, Ndn shRNA Plasmid (h): sc-37318-SH and Ndn shRNA (h) Lentiviral Particles: sc-37318-V.

Molecular Weight (predicted) of Ndn: 36 kDa.

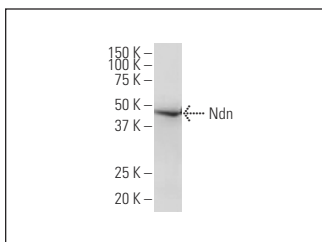
Molecular Weight (observed) of Ndn: 50 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209.

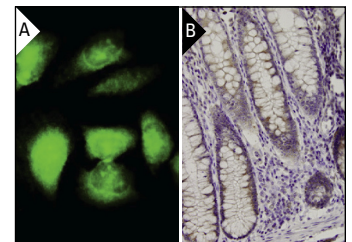
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Ndn (36-V): sc-101224. Western blot analysis of Ndn expression in HL-60 whole cell lysate.



Ndn (36-V): sc-101224. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon tissue showing membrane and cytoplasmic localization (B).

## SELECT PRODUCT CITATIONS

1. Sun, Y., et al. 2022. Noninvasive urinary protein signatures associated with colorectal cancer diagnosis and metastasis. *Nat. Commun.* 13: 2757.

## RESEARCH USE

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