

NOPE (27L-2): sc-100280

BACKGROUND

NOPE (neighbor of Punc E11) is a 1,250 amino acid protein that is highly similar to Punc (putative neuronal cell adhesion molecule). Both NOPE and Punc are transmembrane proteins that belong to the immunoglobulin (Ig) superfamily, which includes deleted in colorectal cancer (DCC), a cell surface receptor involved in embryonic development. NOPE contains five Fibronectin type-III (FnIII) repeats and four Ig-like C2-type repeats, which suggests a role for NOPE in embryonic differentiation and cell adhesion. Unlike the highly homologous extracellular domains of NOPE and Punc, their cytoplasmic domains are very diverged. NOPE is expressed during embryonic development of the notochord, skeletal muscle and ventricular zone of the nervous system. NOPE can also be expressed in the hippocampus of the adult brain.

REFERENCES

- Salbaum, J.M. 1999. Genomic structure and chromosomal localization of the mouse gene Punc. *Mamm. Genome* 10: 107-111.
- Gruppiso, P.A., et al. 2000. Identification of candidate growth-regulating genes that are overexpressed in late gestation fetal liver in the rat. *Biochim. Biophys. Acta* 1494: 242-247.
- Salbaum, J.M. and Kappen, C. 2000. Cloning and expression of NOPE, a new mouse gene of the immunoglobulin superfamily related to guidance receptors. *Genomics* 64: 15-23.
- Yang, W., et al. 2001. Impaired motor coordination in mice that lack punc. *Mol. Cell. Biol.* 21: 6031-6043.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604184. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Toyoda, R., et al. 2005. Identification of Protogenin, a novel immunoglobulin superfamily gene expressed during early chick embryogenesis. *Gene Expr. Patterns* 5: 778-785.

CHROMOSOMAL LOCATION

Genetic locus: IGDCC4 (human) mapping to 15q22.31; Igdcc4 (mouse) mapping to 9 C.

SOURCE

NOPE (27L-2) is a mouse monoclonal antibody raised against recombinant NOPE of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} 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.

RESEARCH USE

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

APPLICATIONS

NOPE (27L-2) is recommended for detection of NOPE of mouse, rat and 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NOPE siRNA (h): sc-90016, NOPE siRNA (m): sc-150034, NOPE shRNA Plasmid (h): sc-90016-SH, NOPE shRNA Plasmid (m): sc-150034-SH, NOPE shRNA (h) Lentiviral Particles: sc-90016-V and NOPE shRNA (m) Lentiviral Particles: sc-150034-V.

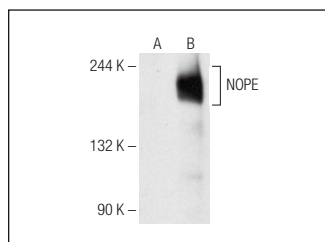
Molecular Weight of NOPE: 134 kDa.

Positive Controls: NOPE (h): 293T Lysate: sc-171126 or HeLa whole cell lysate: sc-2200.

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).

DATA



NOPE (27L-2): sc-100280. Western blot analysis of NOPE expression in non-transfected: sc-117752 (A) and human NOPE transfected: sc-171126 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Song, Y., et al. 2021. A genome-wide CRISPR/Cas9 gene knockout screen identifies immunoglobulin superfamily DCC subclass member 4 as a key host factor that promotes influenza virus endocytosis. *PLoS Pathog.* 17: e1010141.

PROTOCOLS

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