

# NOPE (A-10): sc-398452

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: IGDC4 (human) mapping to 15q22.31; Igdc4 (mouse) mapping to 9 C.

## SOURCE

NOPE (A-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 856-869 within an extracellular domain of NOPE of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NOPE (A-10) is available conjugated to agarose (sc-398452 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398452 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398452 PE), fluorescein (sc-398452 FITC), Alexa Fluor® 488 (sc-398452 AF488), Alexa Fluor® 546 (sc-398452 AF546), Alexa Fluor® 594 (sc-398452 AF594) or Alexa Fluor® 647 (sc-398452 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398452 AF680) or Alexa Fluor® 790 (sc-398452 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398452 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

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

## APPLICATIONS

NOPE (A-10) is recommended for detection of NOPE of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) 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.

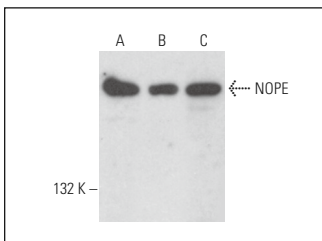
Molecular Weight of NOPE: 134 kDa.

Positive Controls: NOPE (h): 293T Lysate: sc-171126, HeLa whole cell lysate: sc-2200 or C6 whole cell lysate: sc-364373.

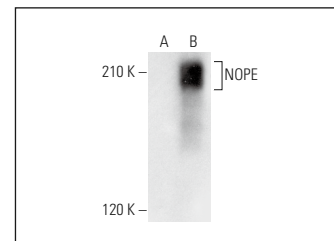
## RECOMMENDED SUPPORT REAGENTS

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.

## DATA



NOPE (A-10): sc-398452. Western blot analysis of NOPE expression in HeLa (A), 3T3-L1 (B) and C6 (C) whole cell lysates.



NOPE (A-10): sc-398452. 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

- Mun, S., et al. 2022. Transcriptome profile of membrane and extracellular matrix components in ligament-fibroblastic progenitors and cementoblasts differentiated from human periodontal ligament cells. *Genes* 13: 659.

## STORAGE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA