

# NPAL3 (D-12): sc-137638

## BACKGROUND

NPAL3, also known as NIPAL3, is a 406 amino acid multi-pass membrane protein that belongs to the NIPA family and exists as 3 alternatively spliced isoforms. The gene that encodes NPAL3 consists of approximately 57,229 bases and maps to human chromosome 1p36. Chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1.

## REFERENCES

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3. Bowling, E.L., et al. 2000. The Stickler syndrome: case reports and literature review. *Optometry* 71: 177-182.
4. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. *Mol. Genet. Metab.* 73: 313-321.
5. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. *Eur. J. Hum. Genet.* 12: 365-371.
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8. Grznil, P., et al. 2009. Targeted disruption of the mouse Npal3 gene leads to deficits in behavior, increased IgE levels, and impaired lung function. *Cytogenet. Genome Res.* 125: 186-200.
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## CHROMOSOMAL LOCATION

Genetic locus: NIPAL3 (human) mapping to 1p36.11.

## SOURCE

NPAL3 (D-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NPAL3 of human origin.

## 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-137638 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NPAL3 (D-12) is recommended for detection of NPAL3 of 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).

NPAL3 (D-12) is also recommended for detection of NPAL3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NPAL3 siRNA (h): sc-88149, NPAL3 shRNA Plasmid (h): sc-88149-SH and NPAL3 shRNA (h) Lentiviral Particles: sc-88149-V.

Molecular Weight of NPAL3 isoforms: 45/36/25 kDa.

## 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.

## 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.