

# NLE1 (H-240): sc-68365

## BACKGROUND

The Notch signaling pathway is an evolutionary conserved system that is involved in intracellular communication. Notch receptors play an important role in development and cell-fate decisions. Notchless is a loss-of-function mutant allele that encodes for protein NLE1 (notchless homolog 1). NLE1 is a 485 amino acid WD40-repeat protein that binds to the cytoplasmic domain of notch, regulating its signaling activity in *Drosophila melanogaster* and in mice. Deletion of the NLE1 gene in mice during the early stages of development results in embryonic death, while gene deletion in the late stages of development leads to activation of a caspase-3-dependent apoptotic pathway. In plants, NLE1 is crucial for normal cellular growth and development. Under-expression during shoot proliferation causes pleiotropic defects such as delayed flowering and abnormal organ maturation. It may also play a role in 60S ribosomal subunit biogenesis in yeast. NLE1 contains eight WD40 domains and produces one isoform due to alternative splicing.

## REFERENCES

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- Cormier, S., Le Bras, S., Souilhol, C., Vandormael-Pournin, S., Durand, B., Babinet, C., Baldacci, P. and Cohen-Tannoudji, M. 2006. The murine ortholog of notchless, a direct regulator of the notch pathway in *Drosophila melanogaster*, is essential for survival of inner cell mass cells. *Mol. Cell Biol.* 26: 3541-3549.
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- Chantha, S.C. and Matton, D.P. 2007. Underexpression of the plant notchless gene, encoding a WD-repeat protein, causes pleiotropic phenotype during plant development. *Planta* 225: 1107-1120.
- SWISS-PROT/TrEMBL (Q9NVX2). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: NLE1 (human) mapping to 17q12; Nle1 (mouse) mapping to 11 C.

## SOURCE

NLE1 (H-240) is a rabbit polyclonal antibody raised against amino acids 1-240 mapping at the N-terminus of NLE1 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.

## APPLICATIONS

NLE1 (H-240) is recommended for detection of NLE1 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)], 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).

NLE1 (H-240) is also recommended for detection of NLE1 in additional species, including porcine.

Suitable for use as control antibody for NLE1 siRNA (h): sc-62691, NLE1 siRNA (m): sc-62692, NLE1 shRNA Plasmid (h): sc-62691-SH, NLE1 shRNA Plasmid (m): sc-62692-SH, NLE1 shRNA (h) Lentiviral Particles: sc-62691-V and NLE1 shRNA (m) Lentiviral Particles: sc-62692-V.

Molecular Weight of NLE1: 53 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.


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Try **NLE1 (G-5): sc-377142**, our highly recommended monoclonal alternative to NLE1 (H-240).