



# NKD1 (A-21): sc-102039

## BACKGROUND

The canonical Wnt signaling pathway is a complex network of proteins involving the binding of the Wnt ligand to the frizzled family of receptors, leading to activation of the Dvl proteins and, ultimately, a change in the  $\beta$ -catenin concentration in the nucleus. NKD1 (Naked 1) is a 470 amino acid protein which functions as a negative regulator of the canonical Wnt signaling pathway. Through interactions with Dvl-1, Dvl-2, Dvl-3 and PP2A-C $\alpha$ / $\beta$ , NKD1 functions as a switch that restricts classical Wnt signaling and activates a second Wnt signaling pathway that controls planar cell polarity. Localized to the cell membrane and cytoplasm, NKD1 is expressed in heart, lung, pancreas, liver, colon, kidney, ovary, placenta, skeletal muscle, prostate, small intestine, leukocyte and spleen. Elevated expression of NKD1 and Conductin mRNA has been identified in some human colon tumors that were known to have activating mutations in the canonical Wnt signaling pathway.

## REFERENCES

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3. Yan, D., et al. 2001. Elevated expression of Axin2 and hNKD mRNA provides evidence that Wnt/ $\beta$ -catenin signaling is activated in human colon tumors. *Proc. Natl. Acad. Sci. USA* 98: 14973-14978.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607851 : World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Koch, A., et al. 2005. Elevated expression of Wnt antagonists is a common event in hepatoblastomas. *Clin. Cancer Res.* 11: 4295-4304.
6. Creighton, M.P., et al. 2005. PR72, a novel regulator of Wnt signaling required for Naked cuticle function. *Genes Dev.* 19: 376-386.
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8. Creighton, M.P., et al. 2006. PR130 is a modulator of the Wnt-signaling cascade that counters repression of the antagonist Naked cuticle. *Proc. Natl. Acad. Sci. USA* 103: 5397-5402.
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## CHROMOSOMAL LOCATION

Genetic locus: NKD1 (human) mapping to 16q12.1.

## SOURCE

NKD1 (A-21) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping raised against NKD1 of human origin of NKD1 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 50  $\mu$ g IgG in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

NKD1 (A-21) is recommended for detection of NKD1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 NKD1 siRNA (h): sc-93414, NKD1 shRNA Plasmid (h): sc-93414-SH and NKD1 shRNA (h) Lentiviral Particles: sc-93414-V.

Molecular Weight of NKD1: 54 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.