

# BEAN (D-20): sc-245034



The Power to Question

## BACKGROUND

BEAN, also known as BEAN1, is a 259 amino acid protein that localizes to membrane. The BEAN gene contains seven exons, which are subject to extensive alternative splicing with two known isoforms. A single-pass membrane protein, BEAN contains two PY motifs and a potential transmembrane domain. BEAN is one of several proteins that interact with NEDD4, which is developmentally regulated and is highly expressed in embryonic tissues. NEDD4 is a member of a growing family of ubiquitin-protein ligases that consist of a lipid-binding domain, two to four WW domains and a C-terminal ubiquitin-protein ligase domain. Mutations in BEAN are associated with spinocerebellar ataxia type 31 (SCA31), which is an adult-onset autosomal-dominant neurodegenerative disorder showing progressive cerebellar ataxia mainly affecting Purkinje cells. The BEAN gene maps to human chromosome 16p21.

## REFERENCES

- Jolliffe, C.N., Harvey, K.F., Haines, B.P., Parasivam, G. and Kumar, S. 2000. Identification of multiple proteins expressed in murine embryos as binding partners for the WW domains of the ubiquitin-protein ligase Nedd4. *Biochem. J.* 351Pt3: 557-565.
- Kamynina, E., Tauxe, C. and Staub, O. 2001. Distinct characteristics of two human Nedd4 proteins with respect to epithelial Na<sup>+</sup> channel regulation. *Am. J. Physiol. Renal Physiol.* 281: F469-F477.
- Kamynina, E., Debonneville, C., Bens, M., Vandewalle, A. and Staub, O. 2001. A novel mouse Nedd4 protein suppresses the activity of the epithelial Na<sup>+</sup> channel. *FASEB J.* 15: 204-214.
- Kanelis, V., Rotin, D. and Forman-Kay, J.D. 2001. Solution structure of a Nedd4 WW domain-ENaC peptide complex. *Nat. Struct. Biol.* 8: 407-412.
- Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612051. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Sato, N., Amino, T., Kobayashi, K., Asakawa, S., Ishiguro, T., Tsunemi, T., Takahashi, M., Matsuura, T., Flanigan, K.M., Iwasaki, S., Ishino, F., Saito, Y., Murayama, S., Yoshida, M., Hashizume, Y., Takahashi, Y., Tsuji, S., Shimizu, N., Toda, T., Ishikawa, K. and Mizusawa, H. 2009. Spinocerebellar ataxia type 31 is associated with "inserted" penta-nucleotide repeats containing (TGGA)n. *Am. J. Hum. Genet.* 85: 544-557.
- Pula, J.H., Gomez, C.M. and Kattah, J.C. 2010. Ophthalmologic features of the common spinocerebellar ataxias. *Curr. Opin. Ophthalmol.* 21: 447-453.
- SWISS-PROT/TrEMBL (Q3B7T3). World Wide Web URL: <http://www.uniprot.org/uniprot/Q3B7T3>

## CHROMOSOMAL LOCATION

Genetic locus: BEAN1 (human) mapping to 16q21; Bean1 (mouse) mapping to 8 D3.

## SOURCE

BEAN (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BEAN 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-245034 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

BEAN (D-20) is recommended for detection of BEAN of mouse and 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).

BEAN (D-20) is also recommended for detection of BEAN in additional species, including equine, canine and bovine.

Suitable for use as control antibody for BEAN siRNA (m): sc-141683, BEAN shRNA Plasmid (m): sc-141683-SH and BEAN shRNA (m) Lentiviral Particles: sc-141683-V.

Molecular Weight of BEAN: 29 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.