SANTA CRUZ BIOTECHNOLOGY, INC.

GNB1L (N-15): sc-86471

BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. GNB1L (guanine nucleotide binding protein (G protein), β polypeptide 1-like), also known as FKSG1, GY2, KIAA1645 or WDR14, is a 327 amino acid protein that exists as 2 alternatively spliced isoforms and contains 6 WD repeats. Expressed ubiquitously with highest levels present in spleen, liver, heart, kidney, pancreas and skeletal muscle, GNB1L is thought to play a role in the etiology of the velocardiofacial/DiGeorge syndrome (VCFS/DGS), a developmental disorder that is the result of a deletion on chromosome 22 and is associated with a variety of facial anomalies and cardiac malformations.

REFERENCES

1. van der Voorn, L. and Ploegh, H.L. 1992. The WD-40 repeat. FEBS Lett. 307: 131-134.
2. Neer, E.J., et al. 1994. The ancient regulatory-protein family of WD-repeat proteins. Nature 371: 297-300.
3. Smith, T.F., et al. 1999. The WD repeat: a common architecture for diverse functions. Trends Biochem. Sci. 24: 181-185.
4. Gong, L., et al. 2000. GNB1L, a gene deleted in the critical region for DiGeorge syndrome on 22q11, encodes a G-protein β-subunit-like polypeptide. Biochim. Biophys. Acta 1494: 185-188.
5. Funke, B., et al. 2001. Isolation and characterization of a novel gene containing WD40 repeats from the region deleted in velo-cardio-facial/DiGeorge syndrome on chromosome 22q11. Genomics 73: 264-271.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610778. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Williams, N.M., et al. 2008. Strong evidence that GNB1L is associated with schizophrenia. Hum. Mol. Genet. 17: 555-566.
8. Ishiguro, H., et al. 2010. Supportive evidence for reduced expression of GNB1L in schizophrenia. Schizophr. Bull. 36: 756-765.

CHROMOSOMAL LOCATION

Genetic locus: GNB1L (human) mapping to 22q11.21.

SOURCE

GNB1L (N-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of GNB1L of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86471 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GNB1L (N-15) is recommended for detection of GNB1L 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).

GNB1L (N-15) is also recommended for detection of GNB1L in additional species, including equine and porcine.

Suitable for use as control antibody for GNB1L siRNA (h): sc-75157, GNB1L shRNA Plasmid (h): sc-75157-SH and GNB1L shRNA (h) Lentiviral Particles: sc-75157-V.

Molecular Weight of GNB1L: 36 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

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) 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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.