ZG16 (V-15): sc-162439

SANTA CRUZ®

BIOTECHNOLOGY

The Power to Question

BACKGROUND

ZG16 (zymogen granule protein 16), also known as JCLN, JCLN1 or ZG16A, is a 167 amino acid protein that plays a role in protein trafficking. A secreted protein, ZG16 localizes to the extracellular matrix, as well as the lumen of the cytoplasmic vesicle and Golgi appartus, where it is stored in zymogen granules. ZG16 is a member of the jacalin lectin family and is highly expressed in liver, with lower levels found in colon, jejunum and ileum. The gene encoding ZG16 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

1. Baraitser, M., et al. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. Clin. Genet. 23: 318-320.

2. Cronshagen, U., et al. 1994. cDNA cloning and characterization of a novel 16 kDa protein located in zymogen granules of rat pancreas and goblet cells of the gut. Eur. J. Cell Biol. 65: 366-377.

3. Loftus, B.J., et al. 1999. Genome duplications and other features in 12 Mb of DNA sequence from human chromosome 16p and 16q. Genomics 60: 295-308.

4. Bomont, P., et al. 2000. The gene encoding gigaxonin, a new member of the cytoskeletal BTB/kelch repeat family, is mutated in giant axonal neuropathy. Nat. Genet. 26: 370-374.

5. Mathew, C.G., et al. 2004. Genetics of inflammatory bowel disease: progress and prospects. Hum. Mol. Genet. 13: R161-R168.

6. Zhou, Y.B., et al. 2007. hZG16, a novel human secreted protein expressed in liver, was down-regulated in hepatocellular carcinoma. Biochem. Biophys. Res. Commun. 355: 679-686.

7. Kanagawa, M., et al. 2011. Crystal structures of human secretory proteins ZG16p and ZG16b reveal a Jacalin-related -prism fold. Biochem. Biophys. Res. Commun. 404: 201-205.

CHROMOSOMAL LOCATION

Genetic locus: ZG16 (human) mapping to 16p11.2; Zg16 (mouse) mapping to 7 F3.

SOURCE

ZG16 (V-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ZG16 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-162439 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZG16 (V-15) is recommended for detection of ZG16 of mouse, rat 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).

Suitable for use as control antibody for ZG16 siRNA (h): sc-93222, ZG16 siRNA (m): sc-108545, ZG16 shRNA Plasmid (h): sc-93222-SH, ZG16 shRNA Plasmid (m): sc-108545-SH, ZG16 shRNA (h) Lentiviral Particles: sc-93222-V and ZG16 shRNA (m) Lentiviral Particles: sc-108545-V.

Molecular Weight of ZG16: 18 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 or our catalog for detailed protocols and support products.