SANTA CRUZ BIOTECHNOLOGY, INC.

GPN2 (L-16): sc-138316

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The Power to Question

BACKGROUND

GPN2 (GPN-loop GTPase 2), also known as ATPBD1B (ATP-binding domain 1 family member B), is a 310 amino acid protein that belongs to the GPN-loop GTPase family. The gene encoding GPN2 maps to human chromosome 1p36.11 and mouse chromosome 4 D2.3. Spanning around 260 million base pairs, chromosome 1 is the largest human chromosome and comprises 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes lamin A. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1. A breakpoint has been identified in 1q which disrupts the DISC1 gene and is linked to schizophrenia. Aberrations in chromosome 1 are found in a variety of cancers including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

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3. Eudy, J.D., et al. 1998. Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type IIa. Science 280: 1753-1757.
4. Lau, E.K., et al. 1999. Two novel polymorphic sequences in the glucocerebrosidase gene region enhance mutational screening and founder effect studies of patients with Gaucher disease. Hum. Genet. 104: 293-300.
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6. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. Mol. Genet. Metab. 73: 313-321.
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8. Betarbet, R., et al. 2008. Fas-associated factor 1 and Parkinson's disease. Neurobiol. Dis. 31: 309-315.
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CHROMOSOMAL LOCATION

Genetic locus: GPN2 (human) mapping to 1p36.11; Gpn2 (mouse) mapping to 4 D2.3.

SOURCE

GPN2 (L-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of GPN2 of human origin.

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-138316 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GPN2 (L-16) is recommended for detection of GPN2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with family member GPN3.

GPN2 (L-16) is also recommended for detection of GPN2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GPN2 siRNA (h): sc-78736, GPN2 siRNA (m): sc-145687, GPN2 shRNA Plasmid (h): sc-78736-SH, GPN2 shRNA Plasmid (m): sc-145687-SH, GPN2 shRNA (h) Lentiviral Particles: sc-78736-V and GPN2 shRNA (m) Lentiviral Particles: sc-145687-V.

Molecular Weight of GPN2: 35 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) 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 or our catalog for detailed protocols and support products.