

VAT1L (D-12): sc-136731

BACKGROUND

VAT1L, also known as synaptic vesicle membrane protein VAT-1 homolog-like or KIAA1576, is a 419 amino acid protein that belongs to the zinc-containing alcohol dehydrogenase family and quinone oxidoreductase subfamily. The gene encoding VAT1L maps to human chromosome 16, which encodes over 900 genes in approximately 90 million base pairs, makes up nearly 3% of human cellular DNA and is associated with a variety of genetic disorders. 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, though through the CREBBP gene which encodes a critical CREB binding protein. Signs of Rubinstein-Taybi include mental retardation and predisposition to tumor growth and white blood cell neoplasias. Crohn's disease is a gastrointestinal inflammatory condition associated with chromosome 16 through the NOD2 gene. An association with systemic lupus erythematosus and a number of other autoimmune disorders with the pericentromeric region of chromosome 16 has led to the identification of SLC5A11 as a potential autoimmune modifier.

REFERENCES

1. Ben Hamida, C., et al. 1997. Homozygosity mapping of giant axonal neuropathy gene to chromosome 16q24.1. *Neurogenetics* 1: 129-133.
2. Karlsson, J., et al. 2003. Novel quantitative trait loci controlling development of experimental autoimmune encephalomyelitis and proportion of lymphocyte subpopulations. *J. Immunol.* 170: 1019-1026.
3. Forabosco, P., et al. 2006. Meta-analysis of genome-wide linkage studies of systemic lupus erythematosus. *Genes Immun.* 7: 609-614.
4. Carneiro, L.A., et al. 2007. NOD-like receptors in innate immunity and inflammatory diseases. *Ann. Med.* 39: 581-593.
5. King, K., et al. 2007. Identification, evolution, and association study of a novel promoter and first exon of the human NOD2 (CARD15) gene. *Genomics* 90: 493-501.
6. Gervasini, C., et al. 2007. High frequency of mosaic CREBBP deletions in Rubinstein-Taybi syndrome patients and mapping of somatic and germ-line breakpoints. *Genomics* 90: 567-573.
7. Koop, O., et al. 2007. Genotype-phenotype analysis in patients with giant axonal neuropathy (GAN). *Neuromuscul. Disord.* 17: 624-630.

CHROMOSOMAL LOCATION

Genetic locus: VAT1L (human) mapping to 16q23.1; Vat1l (mouse) mapping to 8 E1.

SOURCE

VAT1L (D-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of VAT1L 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-136731 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VAT1L (D-12) is recommended for detection of VAT1L of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 other KIAA family members.

VAT1L (D-12) is also recommended for detection of VAT1L in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for VAT1L siRNA (h): sc-93355, VAT1L siRNA (m): sc-140930, VAT1L shRNA Plasmid (h): sc-93355-SH, VAT1L shRNA Plasmid (m): sc-140930-SH, VAT1L shRNA (h) Lentiviral Particles: sc-93355-V and VAT1L shRNA (m) Lentiviral Particles: sc-140930-V.

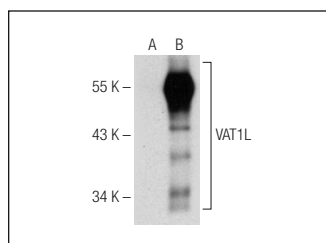
Molecular Weight of VAT1L: 46 kDa.

Positive Controls: VAT1L (h): 293T Lysate: sc-158660.

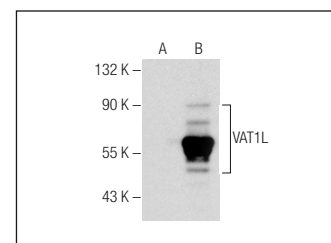
RECOMMENDED SECONDARY REAGENTS

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.

DATA



VAT1L (D-12): sc-136731. Western blot analysis of VAT1L expression in non-transfected: sc-117752 (A) and human VAT1L transfected: sc-158660 (B) 293T whole cell lysates.



VAT1L (D-12): sc-136731. Western blot analysis of VAT1L expression in non-transfected: sc-117752 (A) and human VAT1L transfected: sc-370489 (B) 293T whole cell lysates.

RESEARCH USE

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