SANTA CRUZ BIOTECHNOLOGY, INC.

VIPL (K-14): sc-162386

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The Power to Question

BACKGROUND

Lectin mannose-binding 1, also designated vesicular integral-membrane protein (VIP36), and lectin mannose-binding 2, also designated ERGIC-53, comprise a family of membrane bound, ubiquitously expressed proteins involved in the selective transport of newly synthesized glycoproteins from the endoplasmic reticulum to the ER-Golgi intermediate compartment. VIPL (VIP36-like protein), also known as LMAN2L (lectin, mannose-binding 2-like), is a 348 amino acid single-pass type I membrane protein that localizes to the endoplasmic reticulum and Golgi apparatus. Containing one L-type lectin-like domain, VIPL is highly expressed in skeletal muscle and kidney, and is found at intermediate levels in heart, liver and placenta, and low levels in brain, thymus, spleen, small intestine and lung. VIPL is suggested to be involved in the regulation of export from the endoplasmic reticulum of a subset of glycoproteins. VIPL may function as a regulator of ERGIC-53. VIPL exists a two alternatively spliced isoforms.

REFERENCES

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2. Kappeler, F., et al. 1994. A dual role for COOH-terminal lysine residues in pre-Golgi retention and endocytosis of ERGIC-53. J. Biol. Chem. 269: 6279-6281.
3. Hauri, H.P., et al. 2002. Lectins and protein traffic early in the secretory pathway. Biochem. Soc. Symp. 69: 73-82.
4. Neve, E.P., et al. 2003. VIPL, a VIP36-like membrane protein with a putative function in the export of glycoproteins from the endoplasmic reticulum. Exp. Cell Res. 288: 70-83.
5. Nufer, O., et al. 2003. Profile-based data base scanning for animal L-type lectins and characterization of VIPL, a novel VIP36-like endoplasmic reticulum protein. J. Biol. Chem. 278: 15886-15896.
6. Hara-Kuge, S., et al. 2004. The binding of VIP36 and α-amylase in the secretory vesicles via high-mannose type glycans. Glycobiology 14: 739-744.
7. Kamiya, Y., et al. 2005. Sugar-binding properties of VIP36, an intracellular animal lectin operating as a cargo receptor. J. Biol. Chem. 280: 37178-37182.
8. Neve, E.P., et al. 2005. Oligomerization and interacellular localization of the glycoprotein receptor ERGIC-53 is independent of disulfide bonds. J. Mol. Biol. 354: 556-568.

CHROMOSOMAL LOCATION

Genetic locus: LMAN2L (human) mapping to 2q11.2; Lman2l (mouse) mapping to 1 B.

SOURCE

VIPL (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VIPL 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-162386 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VIPL (K-14) is recommended for detection of VIPL 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); non cross-reactive with VIP or VIP36.

VIPL (K-14) is also recommended for detection of VIPL in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for VIPL siRNA (h): sc-94296, VIPL siRNA (m): sc-155109, VIPL shRNA Plasmid (h): sc-94296-SH, VIPL shRNA Plasmid (m): sc-155109-SH, VIPL shRNA (h) Lentiviral Particles: sc-94296-V and VIPL shRNA (m) Lentiviral Particles: sc-155109-V.

Molecular Weight of VIPL: 32 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.