SANTA CRUZ BIOTECHNOLOGY, INC.

PHM27 (020-03): sc-57400

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Vasoactive intestinal peptide (VIP), a 28 amino acid peptide hormone, plays many physiological roles in the peripheral and central nervous systems. Peptide histidine methionine 27 (PHM27) is a peptide containing an N-terminal histidine and C-terminal methionine amide. VIP and PHM27 are encoded by adjacent exons, and they both efficiently enhance glucose-induced Insulin secretion from β cells by an autocrine mechanism. PHM27 also inhibits (125)I-calcitonin from cell membranes containing transiently expressed human calcitonin. PHM27 may provide a valuable technique to enhancing Insulin secretion in clinical diabetes.

REFERENCES

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2. Bodner, M., et al. 1985. Coding sequences for vasoactive intestinal peptide and PHM27 peptide are located on two adjacent exons in the human genome. Proc. Natl. Acad. Sci. USA 82: 3548-3551.
3. Fahrenkrug, J. and Pedersen, J.H. 1986. Cosecretion of peptide histidine methionine (PHM) and vasoactive intestinal peptide (VIP) in patients with VIP-producing tumors. Peptides 7: 717-721.
4. Sasaki, A., et al. 1987. Distribution, plasma concentration, and *in vivo* prolactin-releasing activity of peptide histidine methionine in humans. J. Clin. Endocrinol. Metab. 65: 683-688.
5. Kato, I., et al. 1994. Transgenic mice overexpressing human vasoactive intestinal peptide (VIP) gene in pancreatic β cells. Evidence for improved glucose tolerance and enhanced Insulin secretion by VIP and PHM27 *in vivo*. J. Biol. Chem. 269: 21223-21228.
6. Gras, S., et al. 1994. Vasoactive intestinal polypeptide and peptide histidine methionine. Presence in human follicular fluid and effects on DNA synthesis and steroid secretion in cultured human granulosa/lutein cells. Hum. Reprod. 9: 1053-1057.
7. Watanobe H. and Tamura T. 1994. Stimulation by peptide histidine methionine (PHM) of adrenocorticotropin secretion in patients with Cushing's disease: a comparison with the effect of vasoactive intestinal peptide (VIP) and a study on the effect of combined administration of corticotropin-releasing hormone with PHM or VIP. J. Clin. Endocrinol. Metab. 78: 1372-1377.
8. Heraud, C., et al. 2004. Neuritogenesis induced by vasoactive intestinal peptide, pituitary adenylate cyclase-activating polypeptide, and peptide histidine methionine in SH-SY5y cells is associated with regulated expression of cytoskeleton mRNAs and proteins. J. Neurosci. Res. 75: 320-329.
9. Ma, J.N., et al. 2004. Discovery of novel peptide/receptor interactions: identification of PHM27 as a potent agonist of the human calcitonin receptor. Biochem. Pharmacol. 67: 1279-1284.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: VIP (human) mapping to 6q25.2.

SOURCE

PHM27 (020-03) is a mouse monoclonal antibody raised against synthetic carrier coupled PHM of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PHM27 (020-03) is recommended for detection of free Peptide Histidine Methionine of human origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with PACAP and is non cross-reactive with GLP1, GLP2 VIP or glucagon.

Molecular Weight of PHM27: 50 kDa.

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.