

CaMKV (h4): 293T Lysate: sc-158337

BACKGROUND

The Ca^{2+} /calmodulin-dependent protein kinases (CaMKs) comprise a structurally related subfamily of serine/threonine kinases. CaMKV (CaM kinase-like vesicle-associated), also known as 1G5 or VACAMKL, is a 501 amino acid protein that localizes to cytoplasmic vesicles, as well as to the cell membrane, and contains one protein kinase domain. Although a member of the CaMK family, CaMKV is thought to be catalytically inactive, but it may play a role in vesicle function and nervous system development. Multiple isoforms of CaMKV exist due to alternative splicing events. The gene encoding CaMKV maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. Godbout, M., Erlander, M.G., Hasel, K.W., Danielson, P.E., Wong, K.K., Battenberg, E.L., Foye, P.E., Bloom, F.E. and Sutcliffe, J.G. 1994. 1G5: a calmodulin-binding, vesicle-associated, protein kinase-like protein enriched in forebrain neurites. *J. Neurosci.* 14: 1-13.
2. Müller, S., Stanyon, R., Finelli, P., Archidiacono, N. and Wienberg, J. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
3. Braga, E.A., Kashuba, V.I., Maliukova, A.V., Loginov, V.I., Senchenko, V.N., Bazov, I.V., Kiselev, L.L. and Zabarovskii, E.R. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
4. Tsend-Ayush, E., Grützner, F., Yue, Y., Grossmann, B., Hänsel, U., Sudbrak, R. and Haaf, T. 2004. Plasticity of human chromosome 3 during primate evolution. *Genomics* 83: 193-202.
5. Ballif, B.A., Villén, J., Beausoleil, S.A., Schwartz, D. and Gygi, S.P. 2004. Phosphoproteomic analysis of the developing mouse brain. *Mol. Cell. Proteomics* 3: 1093-1101.
6. Yue, Y., Grossmann, B., Ferguson-Smith, M., Yang, F. and Haaf, T. 2005. Comparative cytogenetics of human chromosome 3q21.3 reveals a hot spot for ectopic recombination in hominoid evolution. *Genomics* 85: 36-47.
7. Darai, E., Kost-Alimova, M., Kiss, H., Kansoul, H., Klein, G. and Imreh, S. 2005. Evolutionarily plastic regions at human 3p21.3 coincide with tumor breakpoints identified by the "elimination test". *Genomics* 86: 1-12.

CHROMOSOMAL LOCATION

Genetic locus: CAMKV (human) mapping to 3p21.31.

PRODUCT

CaMKV (h4): 293T Lysate represents a lysate of human CaMKV transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

CaMKV (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive CaMKV antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.