# CaMKV (h2): 293T Lysate: sc-170837



The Power to Question

## **BACKGROUND**

The Ca<sup>2+</sup>/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 3p21.31, 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**

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

# **CHROMOSOMAL LOCATION**

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

#### **PRODUCT**

CaMKV (h2): 293T Lysate represents a lysate of human CaMKV transfected 293T cells and is provided as 100  $\mu g$  protein in 200  $\mu l$  SDS-PAGE buffer.

#### **APPLICATIONS**

CaMKV (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive CaMKV antibodies.

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.

**Santa Cruz Biotechnology, Inc.** 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**