

Gene Section

Short Communication

CRTC1 (CREB regulated transcription coactivator 1)

Göran Stenman

Lundberg Laboratory for Cancer Research, Department of Pathology, Goteborg University, Sahlgrenska University Hospital, SE-413 45 Goteborg, Sweden (GS)

Published in Atlas Database: July 2003

Online updated version: <http://AtlasGeneticsOncology.org/Genes/CRTC1ID471ch19p13.html>
DOI: 10.4267/2042/37985

This work is licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 2.0 France Licence.
© 2003 Atlas of Genetics and Cytogenetics in Oncology and Haematology

Identity

Other names: KIAA0616; FLJ14027; WAMTP1; MECT1; TORC1

HGNC (Hugo): CRTC1

Location: 19p13.11

DNA/RNA

Description

Spans 99 kb; contains at least 14 exons.

Protein

Localisation

Predicted nuclear localization.

Function

Unknown.

Implicated in

Mucoepidermoid carcinoma with $t(11;19)(q21-22;p13)$

Disease

Most common type of malignant salivary gland tumor; second most frequent lung tumor of bronchial gland origin.

Hybrid/Mutated Gene

MECT1- MAML2; exon 1 of MECT1 fused to exons 2-5 of MAML2.

Abnormal Protein

MECT1-MAML2; in the fusion protein the first 171 aa including the basic domain of MAML2 are replaced by 42 aa of MECT1; there are no sequence similarities in the N-terminal domains of MAML2 and MECT1; the fusion protein activates transcription of the Notch target gene HES1 independently of both Notch ligand and CSL.

References

Lin SE, Oyama T, Nagase T, Harigaya K, Kitagawa M. Identification of new human mastermind proteins defines a family that consists of positive regulators for notch signaling. *J Biol Chem* 2002;277:50612-50620.

Wu L, Sun T, Kobayashi K, Gao P, Griffin JD. Identification of a family of mastermind-like transcriptional coactivators for mammalian notch receptors. *Mol Cell Biol* 2002;22:7688-7700.

Tonon G, Modi S, Wu L, Kubo A, Coxon AB, Komiya T, O'Neil K, Stover K, El-Naggar A, Griffin JD, Kirsch IR, Kaye FJ. $t(11;19)(q21;p13)$ translocation in mucoepidermoid carcinoma creates a novel fusion product that disrupts a Notch signaling pathway. *Nat Genet* 2003;33:208-213.

This article should be referenced as such:

Stenman G. CRTC1 (CREB regulated transcription coactivator 1). *Atlas Genet Cytogenet Oncol Haematol*. 2003; 7(3):171.