CCDC6 (coiled-coil domain containing 6)

Nick CP Cross

Wessex Regional Genetics Laboratory, Salisbury District Hospital, Salisbury, SP2 8BJ, UK (NCPC)

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Identity

Other names: D10S170; H4; TST1
HGNC (Hugo): CCDC6
Location: 10q21.2

DNA/RNA

Description
At least 8 exons spanning >76 kb (gene incompletely characterized).

Pseudogene
None reported.

Protein

Description
585 amino acid leucine zipper protein.

Expression
Widely expressed.

Function
Unknown.

Homology
Weak but significant homology to the myosin superfamily.

Implicated in

Papillary thyroid carcinoma

Cytoigenetics
inv(10)(q11.2q21).

Hybrid/Mutated gene
H4-RET (also known as PTC1).

Abnormal protein
Contains the leucine zipper of H4 and the entire tyrosine kinase domain of RET. The fusion is a constitutively active tyrosine kinase.

Oncogenesis
In transgenic mice the fusion gave rise to mammary adenocarcinomas and, less frequently, hyperplasia of sebaceous glands and rare benign skin tumors.

Negative chronic myeloid leukaemia/chronic myelomonocytic leukemia

Prognosis
Too few cases reported but likely to be similar to CML.

Cytogenetics
t(5;10)(q33;q21.2).

Hybrid/Mutated gene
H4-PDGFRB. In a single case analyzed the translocation was found to be complex at the molecular level.

Abnormal protein
Contains the leucine zipper of H4 and the entire tyrosine kinase domain and transmembrane domain of PDGFRB.

References


Tong Q, Xing S, Jhiang SM. Leucine zipper-mediated dimerization is essential for the PTC1 oncogenic activity. J Biol Chem. 1997 Apr 4;272(14):9043-7


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