

Gene Section

Mini Review

CCDC6 (coiled-coil domain containing 6)

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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

Cytogenetics

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.

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