

Gene Section

Short Communication

CDX2 (caudal-related homeobox 2)

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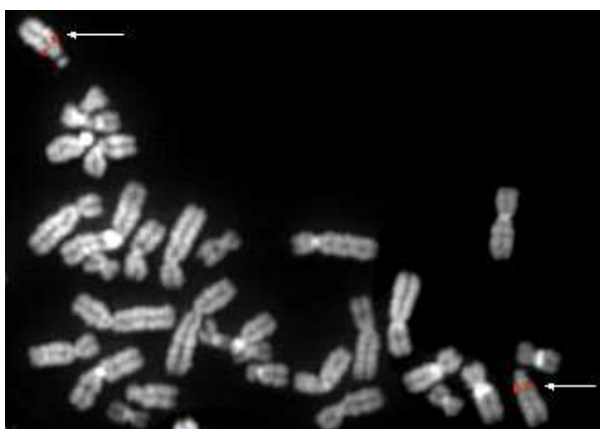
Identity

Other names: CDX3

HGNC (Hugo): CDX2

Location: 13q12.3

Local order: IPF1-CDX2- FLT3 -FLT1.



bA153M24

CDX2 (13q12) - Courtesy Mariano Rocchi, Resources for Molecular Cytogenetics.

DNA/RNA

Description

Three exons transcribed from telomere to centromere.

Protein

Description

311 amino acid protein of MW 33kDa. Class I homeobox gene related to *Drosophila* caudal.

Expression

Nuclear protein normally expressed almost exclusively in the intestine, where it plays a role in the proliferation and differentiation of intestinal epithelial cells.

Mutations

Somatic

Found to be mutated in rare cases of colorectal carcinoma.

Implicated in

t(12;13)(p13;q12) acute non lymphocytic leukaemia --> ETV6/CDX2

Abnormal protein

Fusion of ETV6 exon 2 to CDX2 exon 2. The predicted protein contains the N-terminal region of ETV6 38 fused to the entire homeobox of CDX2. The single case described that harbours this fusion also expressed normal CDX2, which is not normally expressed in haemopoietic cells.

References

Drummond F, Putt W, Fox M, Edwards YH. Cloning and chromosome assignment of the human CDX2 gene. *Ann Hum Genet.* 1997 Sep;61(Pt 5):393-400

Wicking C, Simms LA, Evans T, Walsh M, Chawengsaksophak K, Beck F, Chenevix-Trench G, Young J, Jass J, Leggett B, Wainwright B. CDX2, a human homologue of *Drosophila* caudal, is mutated in both alleles in a replication error positive colorectal cancer. *Oncogene.* 1998 Aug 6;17(5):657-9

Chase A, Reiter A, Burci L, Cazzaniga G, Biondi A, Pickard J, Roberts IA, Goldman JM, Cross NC. Fusion of ETV6 to the caudal-related homeobox gene CDX2 in acute myeloid leukemia with the *t(12;13)(p13;q12)*. *Blood.* 1999 Feb 1;93(3):1025-31

da Costa LT, He TC, Yu J, Sparks AB, Morin PJ, Polyak K, Laken S, Vogelstein B, Kinzler KW. CDX2 is mutated in a colorectal cancer with normal APC/beta-catenin signaling. *Oncogene*. 1999 Sep 2;18(35):5010-4

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