t(3;3)(q25;q27)

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Disease
Non Hodgkin lymphoma.

Epidemiology
One case of follicular lymphoma transformed to diffuse aggressive lymphoma, from a study with no individual data (Akasaka et al., 2003).

Genes involved and proteins

**MBNL1**

Location: 3q25

Protein
Various splicing forms; one isoform comprises 388 amino acids, with 4 zinc fingers at amino acids 13-41, 47-73, 179-207 and 215-241, according to Swiss-Prot. RNA-binding protein which regulates alternative splicing of pre-mRNAs. MBNL1 has a high-affinity binding for UGCU motifs, but cytidines are also often present in position 1 or 4, and general MBNL1 binding site can be defined as YGCY (Goers et al., 2010). Plays an important role in the development of myotonic dystrophy 1 pathology. MBNL1 and MBNL2 play a facilitatory role in insulin receptor exon 11 splicing (Dansithong et al., 2005). MBNL1 also regulates sarcoplasmic/endoplasmic reticulum Ca(2+)-ATPase 1 (SERCA1), the cardiac troponin T (cTNT) , and the fast troponin T (TNNT3) splicings.

**BCL6**

Location: 3q27

Protein
706 amino acids; composed of a NH2-term BTB/POZ domain (amino acids 1-130 (32-99 according to Swiss-Prot) which mediates homodimerization and protein-protein interactions with other corepressors (including HDAC1 and NCOR2/SMRT to constitute a large repressing complex, another transcription repression domain (191-386), PEST sequences (300-417) with a KKYK motif (375-379), and six zinc finger at the C-term (518-541, 546-568, 574-596, 602-624, 630-652, 658-681), responsible for sequence specific DNA binding. Transcription repressor; recognizes the consensus sequence: TTCCT(A/C)GAA (Albagli-Curiel, 2003).

References


This article should be referenced as such: