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Leukaemia Section

Short Communication

t(3;6)(q27;q14) SNHG5/BCL6

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Clinics and pathology

Disease

Non Hodgkin lymphoma

Clinics

The t(3;6)(q27;q14) was found in a human diffuse large B-cell lymphoma cell line (Tanaka et al., 2000), and in a case of follicular lymphoma transformed to diffuse aggressive lymphoma, from a study with no individual data (Akasaka et al., 2003).

Genes involved and proteins

BCL6

Location
3q27.3

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). Role in germinal centers of lymphoid follicles. BCL6 prevents ATM and TP53 to induce apoptosis in response to DNA rearrangements such as somatic hypermutation and class switch recombination. Therefore essential for normal B cell development.

SNHG5

Location
6q14.3

Protein
SNHG5 is also known as U50HG. SNHG5 exons do not encode a polypeptide product (small nucleolar RNA (snoRNA) sequence). SNHG5 is composed of six exons. It possesses an oligopyrimidine tract that is characteristic of the 5'-terminal oligopyrimidine (5'TOP gene family) which have been shown to regulate cell growth.

Result of the chromosomal anomaly

Hybrid gene

Description
Breakpoint in BCL6 first intron.

References

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