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Gene Section
Mini Review

ETV6 (ETS variant gene 6 (TEL oncogene))

Serge Pierrick Romana

Service de Cytogenetique (Unite de Cytogenetique Moleculaire), Hopital Necker-Enfants-Malades, 149, rue de Sevres, 75015 Paris, France (SPR)

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Identity

Other names: TEL (translocation ets leukemia)

Location: 12p13.1

DNA/RNA

Description

The gene spans a region of 240 kb.

Transcription

Transcription is from telomere to centromere; there are three species of transcripts: 2400 kb, 4300 kb and 6200 kb; the gene encodes for a 1356 kb cDNA.

Protein

Description

Two TEL human protein isoforms have been characterized: one of 53 kDa and one of 57 kDa; these correspond respectively to translational initiation from the second in frame methionine (codon 43) and from the first in frame methionine (codon 1); it has been demonstrated that these two isoforms are phosphorylated; these proteins belong to the ETS transcription factors family characterized by the presence of 85 amino acids, the ETS domain; this domain is responsible for the sequence specific DNA-binding activity GGAA/T flanked by a 5-8 nucleotides contributing to the specificity of each proteins ETS members; TEL possesses an N-terminal domain called NH2 terminal conserved region (NCR) which is found in other ETS proteins. This TEL domain unlike most of the other NCR domains is responsible for the TEL protein homotypic olimerization capacity.

Expression

In mouse, the TEL proteins are more expressed in the neural tube, in cranial node, in mesenchymateus tissue adjacent to the primitive intestine.

Localisation

Immunofluorescent experiences revealed a nucleus localization of the TEL proteins.

Function

TEL proteins belong to the ETS family transcription factors; different mouse KO experiences have demonstrated that TEL are important in the vitelline angiogenesis and in the bone marrow hematopoiesis.

Implicated in

Leukemia and sarcoma

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