Leukaemia Section
Short Communication

**t(4;21)(q31;q22)**

Jean-Loup Huret

Genetics, Dept Medical Information, University of Poitiers, CHU Poitiers Hospital, F-86021 Poitiers, France

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**Clinics and pathology**

Disease
Acute myeloid leukaemia (AML)

Epidemiology
Only one case to date, a 81 year old male patient with M1 AML.

Prognosis
No data.

**Genes involved and Proteins**

**SH3D19/Eve1**

Location: 4q31

Protein
Adaptor protein; may play a role in the positive regulation of the activity of ADAMs (A disintegrin and metalloproteases).

**RUNX1**

Location: 21q22

Protein
Transcription factor (activator) for various hematopoietic-specific genes, which expression is limited to hematopoetic stem cells, and endothelial cells and mesenchymal cells in the embryo; core binding factor family member which forms heterodimers with CBFB; binds to the core site 5’ PyGPyGGTPy 3’ of promoters and enhancers.

**Results of the chromosomal anomaly**

Hybrid gene

5’ RUNX1 -3’ SH3D19

**References**


Nguyen TT, Ma LN, Slovak ML, Bangs CD, Cherry AM, Arber DA. Identification of novel Runx1 (AML1) translocation partner genes SH3D19, YTHD12, and ZNF687 in acute myeloid leukaemia. Genes Chromosomes Cancer 2006;45:918-932.

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