

## t(8;19) (p11;q13)

### Identity

**Note** Two distinct clinical syndromes have been associated with the 8p11-p12 region :

Stem-cell myeloproliferative disorder with [FGFR1](#) rearrangement  
AML M4 or M5 erythrophagocytosis-associated with MOZ rearrangement.

This t(8;19)(p11;q13) with MOZ involvement should not be confused with the t(8;19)(p11;q13) with FGFR1 involvement found in the stem-cell myeloproliferative disorder.

The partners of 8p11 are [8q13](#), 14q11, 16p13, 19q13, [22q13](#) and 3q27, 17q12 in a complexe translocation t(3;8;17)(q27;p11;q12).

### Clinics and Pathology

**Disease** Acute myelomonocytic or monocytic leukaemia (M4, M5a, M5b) associated with erythrophagocytosis by blasts noted to various degree.

Epidemiology Rare

Cytology Morphology feature observed in AML with t(8;16).

Prognosis probably poor

### Cytogenetics

Cytogenetics t(8;19) (p11;q13) is a variant of [t\(8;16\) \(p11;p13\)](#)

Morphological

Additional Two cases :

anomalies 46,XX,t(8;19)(p11;q13.2)/idem,-16,-16q+

46,XX, t(8;19)(p11;q13) sole anomaly

### Genes involved and Proteins

**Gene Name** MOZ

Location 8p11

**Note** MOZ contains a LAP (Leukemia associated protein) zinc finger domain, a HAT domain (Histone acetyltransferase) and a acidic domain.

Detection by FISH : YAC 176C9.

**Protein** ZNF220

Monocytic leukemia zinc finger protein

2004 amino acids and 225 kDa nuclear protein, with 2 LAP/PHD-type zinc fingers.

MOZ is a histone acetyltransferase (HAT) and the founding member of the MYST family of HATs, a family that includes proteins involved in cell cycle regulation, chromatin remodeling and dosage compensation.

MOZ plays an important role during hematopoiesis with his transcriptional coregulator activity.

**Gene Name** The partner of MOZ is unknown in this translocation.

Location 19q13

### Result of the

## chromosomal anomaly

### Fusion

**Protein** In the t(8 ;19) the fusion protein is unknown.

**Note**

## External links

Other database [t\(8;19\) \(p11;q13\)](#) [Mitelman database \(CGAP - NCBI\)](#)

Other database [t\(8;19\) \(p11;q13\)](#) [CancerChromosomes \(NCBI\)](#)

## To be noted

Additional cases are needed to delineate the epidemiology of this rare entity:  
**you are welcome to submit a paper to our new [Case Report](#) section.**

## Bibliography

### **A new specific chromosomal rearrangement t(8 ;16)(p11 ;p13) in acute monocytic leukaemia.**

Heims S, Avanzi GC, Billstrom R, Kristofferson U, Mandahl N, Mitelman F.  
Br J Haematol 1987; 66: 323-326.  
Medline [3476150](#)

### **Three cases of translocation t(8 ;16)(p11 ;p13) observed in acute myelomonocytic leukaemia : a new specific subgroup?**

Lai JL, Zandecki M, Jouet JP, Savary KB, Lambiliotte A, Bauters F, Cosson A, Deminatti M.  
Cancer Genet Cytogenet 1987; 27: 101-109.  
Medline [3472640](#)

### **A complex t(3 ;8 ;17) involving breakpoint 8p11 in a case of M5 acute nonlymphocytic leukemia with erythrophagocytosis.**

Bertheas MF, Jaubert J, Vasselon C, Reynaud J, Pomier G, Le Petit JC, Hagemeyer A, Brizard CP.  
Cancer Genet Cytogenet 1989; 42(1): 67-73.  
Medline [2790748](#)

### **A distinct subtype of M4/M5 acute myeloblastic leukaemia associated with t(8 ;16)(p11 ;p13) in a patient with the variant t(8 ;19)(p11 ;q13) a case report and review of the literature**

Stark B, Resnitzky P, Jeison M, Luria D, Blau O, Zaivov R.  
Leuk Res 1995; 19: 367-379.  
Medline [7596149](#)

### **Abnormalities of chromosome band 8p11 in leukemia : two clinical syndromes can be distinguished on the basis of MOZ involvement.**

Aguiar R, Chase A, Coulthard S, Macdonald D, Carapeti M, Reiter A, Sohal J, Lennard A, Goldman J, Cross N.  
Blood 1997; 90(8): 3130-3135.  
Medline [9376594](#)

**FGFR1 and MOZ, two key genes invilved in malignant hemopathies linked to rearrangements within the chromosomal region 8p11-12.**

Pebusque MJ, Chaffanet M, Popovici C, Birnbaum D

Bull Cancer 2000; 87(12): 887-894.

Medline [11174118](#)

**Contributor(s)**

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<http://www.infobiogen.fr/services/chromcancer/Anomalies/t0819p11q13ID1315.html>

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