Patient ID	Patient Name		Birth Date	Sex	Age
SA00175512	TESTING, AMLFA_ABNORMAL		2002-02-02	F	23
Order Number: SA00175512	Client Order Number: SA00175512	Ordering Physician: CLIENT,CLIENT	Report Notes		
Account Information: C7028846 DLMP Rochester		Collected: 06 May 2025 00:00			

Adult-AML panel, FISH

Result Summary
MCR

Abnormal

Interpretation
MCR

The result is abnormal and indicates RUNX1::RUNX1T1 fusion in 87.5% of nuclei. This result is consistent with the t(8;21) observed in the chromosome studies (reported separately).

This 8;21 translocation has been associated with both de novo and therapy-related AML and has a favorable prognosis. Molecular studies to determine KIT mutational status should be considered in core binding factor leukemias [t(8;21), inv(16)/t(16;16)] as KIT mutations confer an intermediate-risk status (Swerdlow et al., WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues. IARC Press:Lyon, 2017; page 132; NCCN Guidelines Version 3.2021, AML).

Clinical and pathologic correlation is recommended.

For monitoring response to therapy, RT-PCR for t(8;21) RUNX1::RUNX1T1 fusion is recommended, per NCCN guidelines; Test: T821Q. Although RT-PCR testing is not available on the current specimen, this testing can be performed on blood or bone marrow collected in EDTA or ACD. Please call 800–533–1710 regarding specimen requirements for RT-PCR based tests.

Result Table
MCR

Abnormality Name	Result	Abn% Cutoff%
t(15;17) PML::RARA fusion	Normal	<4.0
inv(16)/t(16;16) CBFB::MYH11 fusion	Normal	<4.0
11q23(KMT2A sep)	Normal	<10.0
t(8;21) RUNX1::RUNX1T1 fusion	Abnormal	87.5 <4.0

Result
MCR

nuc ish (RUNX1T1,RUNX1)x3(RUNX1T1 con RUNX1)x2[175/200]

Reason for Referral
MCR

r/o AML

Specimen
MCR

Bone Marrow

Source
MCR

Left iliac crest

Method
MCR

Locus and probes	[Strategy;#Nuclei;Vendor]
8q21.3(RUNX1T1), 21q22(RUNX1)	[DFISH;200;AM]
11q23(5'KMT2A,3'KMT2A)	[BAP;100;AM]
15q24.1(PML), 17q21(RARA)	[DFISH;200;AM]
16p13(MYH11), 16q22(CBFB)	[DFISH;200;LDT]

Probe strategies include:
DFISH=dual color, double fusion;
BAP=break-apart probe.
Scoring Method: Manual

Probe vendors include:
LDT = Mayo Clinic Developed
AM = Abbott Molecular, Inc (Des Plaines, IL)

Updated Gene Symbols
KMT2A: previously reported as MLL

Disclaimer
MCR

Applicable to Analyte Specific Reagent (ASR) and Laboratory Developed Tests (LDT). This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the U.S. Food and Drug Administration. This FISH test does not rule out other chromosome abnormalities.

Environment LIQSEQ Template

Performing Site Legend

Code	Laboratory	Address	Lab Director	CLIA Certificate
MCR	Mayo Clinic Laboratories - Rochester Main Campus	200 First Street SW, Rochester, MN 55905	Nikola Baumann Ph.D.	24D0404292

MAYO CLINIC LABORATORIES

Patient ID	Patient Name		Birth Date	Sex	Age
SA00175512	TESTING, AMLFA_ABNORMAL		2002-02-02	F	23
Order Number	**Client Order Number**	**Ordering Physician**	**Report Notes**		
SA00175512	SA00175512	CLIENT,CLIENT			
Account Information		**Collected**			
C7028846 DLMP Rochester		06 May 2025 00:00			

Released By MCR

Xinjie Xu, Ph.D.

Received: 13 May 2025 10:46 **Reported:** 21 May 2025 14:06

Test Environment LTCSEQ Template

Performing Site Legend

Code	Laboratory	Address	Lab Director	CLIA Certificate
MCR	Mayo Clinic Laboratories - Rochester Main Campus	200 First Street SW, Rochester, MN 55905	Nikola Baumann Ph.D.	24D0404292