MAYO CLINIC LABORATORIES

Test Definition: MBRAF

BRAF V600 Somatic Mutation Analysis, Bone Marrow

Overview

Useful For
Classification and/or possible targeted therapies of hematological neoplasms such as hairy cell leukemia, Langerhans cell histiocytosis, Erdheim-Chester disease

Method Name
Real-Time PCR Amplification and Detection

NY State Available
No

Specimen

Specimen Type
Bone Marrow

Shipping Instructions
Specimen must arrive within 7 days of collection.

Necessary Information
The following information is required:
1. Pertinent clinical history
2. Clinical or morphologic suspicion
3. Date of collection
4. Specimen source

Specimen Required
Container/Tube: Lavender top (EDTA)
Specimen Volume: 3 mL
Collection Instructions:
1. Invert several times to mix bone marrow.
2. Send bone marrow specimen in original tube. **Do not aliquot.**
3. Label specimen as bone marrow.

Specimen Minimum Volume
1 mL

Reject Due To

Gross	Reject

hemolysis	
Moderately to severely clotted	Reject

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)	7 days	
	Refrigerated	7 days	

Clinical & Interpretive

Clinical Information

This test uses DNA extracted from the bone marrow to test for the presence of *BRAF* V600E/D and V600K/R/M alterations. *BRAF* mutations occur in many different types of human cancers. Testing for *BRAF* mutations in bone marrow specimens facilitates classification and possible targeted therapies of hematological neoplasms, such as hairy cell leukemia, Langerhans cell histiocytosis, and Erdheim-Chester disease. This is test is not designed for detection of *BRAF* mutations in liquid biopsy of tumors.

Reference Values

An interpretive report will be provided.

Interpretation

The interpretive report includes an overview of the findings.

Results will be characterized as positive, negative, or indeterminate for a V600 somatic mutation.

Cautions

Test results should be interpreted in context of clinical findings and other laboratory data. If results obtained do not match other clinical or laboratory findings, please contact the laboratory for possible interpretation. Misinterpretation of results may occur if the information provided is inaccurate or incomplete.

Clinical Reference

1. Maitre E, Cornet E, Troussard X. Hairy cell leukemia: 2020 update on diagnosis, risk stratification, and treatment. Am J Hematol. 2019;94(12):1413-1422
2. Rodriguez-Galindo C, Allen CE. Langerhans cell histiocytosis. Blood. 2020;135(16):1319-1331
3. Haroche J, Cohen-Aubart F, Amoura Z. Erdheim-Chester disease. Blood. 2020;135(16):1311-1318

Performance

Test Definition: MBRAF

BRAF V600 Somatic Mutation Analysis, Bone Marrow

Method Description
Polymerase chain reaction-based assay using bone marrow sample. This test detects the most common mutation V600E and other variants at the same codon. The limit of detection for this assay is approximately 1%. The mutation is reported using the current standard nomenclature.(Unpublished Mayo method)

PDF Report
No

Day(s) Performed
Monday through Friday

Report Available
1 to 6 days

Specimen Retention Time
Bone marrow: 2 weeks; Extracted DNA: 1 year

Performing Laboratory Location
Mayo Clinic Jacksonville Clinical Lab

Fees & Codes

Fees
- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact Customer Service.

Test Classification
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 US Food and Drug Administration.

CPT Code Information
81210

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
MBRAF	BRAF V600 Somatic Mutation, BM	85101-4

Result ID	Test Result Name	Result LOINC® Value
616930	Result	85101-4
616928	Interpretation	59465-5
616939	Signing Pathologist	18771-6

616936	Method Summary	85069-3
616934	Sample ID	80398-1
616938	Disclaimer	62364-5
616931	Indication for Testing	42349-1
616952	Specimen	31208-2
616933	Source	31208-2