MAYO CLINIC LABORATORIES

1-800-533-1710

BRAFD

BRAF V600E/V600K Somatic Mutation Analysis, Tumor

Patient ID	Patient Name		Birth Date	Sex	Age
SA00182121	BRAFDNORMAL, ATLAS		2005-06-06	F	21
Order Number	**Client Order Number**	**Ordering Physician**	**Report Notes**		
SA00182121	SA00182121	CLIENT,CLIENT			
Account Information		**Collected**			
C7028846 DLMP Rochester		05 Nov 2026 00:00			

BRAF V600 Somatic Mutation Analysis, Tumor

Result Summary

MCR

NEGATIVE

Result

MCR

Provided diagnosis: colorectal carcinoma

BRAF status: Negative for V600E/K mutation

Interpretation

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Current data suggest that the efficacy of EGFR-targeted therapies in colorectal cancer is limited to patients with tumors lacking KRAS, NRAS, and BRAF mutations (1, 2). Thus, the absence of a detectable BRAF mutation within this tumor specimen suggests that this patient may respond to such therapies.

The predictive value of BRAF testing in this context has been reported in conjunction with KRAS and NRAS results and applies to EGFR-targeted therapies, not to other therapeutic agents.

If testing was ordered for evaluation for Lynch syndrome, results should be interpreted in the context of immunohistochemical (IHC) analysis. In the context of loss of MLH1 and PMS2 expression, the BRAF p.V600E mutation is rare in patients with a germline MLH1 gene mutation. However, the BRAF p.V600E mutation is also absent in approximately 30% of patients whose tumors demonstrate loss of MLH1 due to promoter hypermethylation. Thus, this result does not provide predictive information about the presence of a germline mutation in the MLH1 gene for this patient. This result should be interpreted in the context of immunohistochemistry (IHC).

Testing for hypermethylation of the MLH1 promoter would provide additional information about the likelihood of a germline MLH1 gene mutation in this individual (ML1HM / MLH1 Hypermethylation Analys, Tumor).

A genetic consultation may be of benefit.

REFERENCES

1. Ann Oncol. 2013 Aug;24(8):2062–7 (PMID 23666916)
2. J Clin Oncol. 2008 Dec 10;26(35):5705–12 (PMID 19001320)

Specimen

MCR

Tissue, Tumor

Tissue ID

MCR

654

Method

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Microscopic examination was performed by a pathologist to identify areas of tumor for enrichment by macrodissection. Tumor DNA was isolated and evaluated for the presence of BRAF V600E/K mutations using digital droplet PCR analysis.

Disclaimer

1 MCR

This assay is designed to detect BRAF V600E (c.1799T>A) and V600K (c.1798_1799delGTinsAA) mutations in tissue specimens with a tumor purity >5%. Other variants at or adjacent to codon 600 may yield indeterminate results due to probe cross-hybridization. Additionally, rare polymorphisms in the target region for this assay could lead to false-negative or false-positive results.

The validated Limit of Detection (LOD) and Limit of Quantitation (LOQ) thresholds for this assay are as follows:

Threshold	V600E	V600K
LOD	5 copies/reaction	4 copies/reaction
LOQ	10 copies/reaction	9 copies/reaction

Positive results between the LOD and LOQ are associated with a coefficient of variation (CV) >35%.

For Investigational Use Only
Test in development
LTBMP complete

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

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Released By MCR

Katherine B. Geiersbach, M.D.

Received: 05 Nov 2026 08:12 **Reported:** 05 Nov 2026 10:06

Test Environment ETBM Template

Laboratory Notes

1 This test was developed and its performance characteristics were determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

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