MAYO CLINIC LABORATORIES

1-800-533-1710

IHC

Mismatch Repair (MMR) Protein Immunohistochemistry Only, Tumor

Patient ID	Patient Name		Birth Date	Gender	Age
SA00000817	SAMPLEREPDMGLM, VLD20150713A0077		1981-01-01	M	34
Order Number	**Client Order Number**	**Ordering Physician**	**Report Notes**		
SA00000817	SA00000817	CLIENT, CLIENT			
Account Information		**Collected**			
C7028846 DLMP Rochester		12 Jul 2015 15:05			

MMR Protein, IHC Only, Tumor

Result Summary

MCR

LOSS OF MSH2/MSH6

Result

MCR

Provided diagnosis: colorectal adenocarcinoma
IHC: Loss of MSH2 and MSH6 expression; Retention of MLH1 and PMS2 expression

Interpretation

[1] MCR

These results indicate loss of normal DNA mismatch repair function within the tumor. Loss of MSH2/MSH6 protein expression is frequently associated with the presence of a germline (heritable) mutation in MSH2 and less frequently in MSH6. Thus, this individual and other family members are at increased risk for having an inherited colon cancer syndrome due to defective DNA mismatch repair (HNPCC/Lynch syndrome).

It is important to note that these results do not distinguish between somatic and germline mutations. Germline testing of MSH2 (MSH2Z / MSH2 Gene, Full Gene Analysis) and MSH6 (MSH6Z / MSH6 Gene, Full Gene Analysis) on an additional blood sample would be required to distinguish between these two possibilities and provide the opportunity for predictive testing for at risk family members.

These data should be interpreted in the context of the histopathologic findings. A surgical pathology consult may be ordered separately.

A genetic consultation may be of benefit.

ADDITIONAL INFORMATION

Immunohistochemical staining (IHC) is used to determine the presence or absence of protein expression for one or more of the following: MLH1, MSH2, MSH6, and PMS2. Lymphocytes and normal epithelium exhibit strong nuclear staining to serve as positive internal controls for staining of these proteins. Test results should be interpreted in the context of clinical findings, family history, 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.

Specimen

MCR

Tissue, Tumor

Tissue ID

MCR

S15–5999

Released By

MCR

EMILY LAUER

MLH1 IHC

MCR

Performed

MSH2 IHC

MCR

Performed

MSH6 IHC

MCR

Performed

PMS2 IHC

MCR

Performed

Received: 13 Jul 2015 20:21 **Reported:** 24 Jul 2015 13:34

Test Environment ETBM Template

Laboratory Notes

[1] This test was developed and its performance characteristics 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.

Performing Site Legend

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