

Client: Example Client ABC123  
123 Test Drive  
Salt Lake City, UT 84108  
UNITED STATES

Physician: Doctor, Example

**Patient: Patient, Example**

**DOB:** 6/7/1957  
**Gender:** Male  
**Patient Identifiers:** 01234567890ABCD, 012345  
**Visit Number (FIN):** 01234567890ABCD  
**Collection Date:** 00/00/0000 00:00

**Mismatch Repair by Immunohistochemistry**

ARUP test code 0049302

Mismatch Repair by IHC, Result

**Abnormal**

Abnormal immunohistochemical staining for mismatch repair proteins correlates well with the presence of microsatellite instability by PCR. Controls worked appropriately.

These results have been reviewed and approved by [REDACTED], M.D.

**INTERPRETIVE INFORMATION: Mismatch Repair by IHC, Result**

Immunohistochemical staining for mismatch repair proteins can be used as a surrogate test for microsatellite instability as measured by PCR. Normal results correlate well with the absence of microsatellite instability, while abnormal results correlate well with the presence of microsatellite instability. Abnormal results may also qualify patients for immune checkpoint inhibitor treatment. The immunohistochemical staining pattern can also be used as a guide for the subsequent germline evaluation of mismatch repair genes (refer to Lynch Syndrome - HNPCC) testing algorithm at ARUPconsult.com). Normal staining results consist of any level of staining in the tumor cells (unless evidence of clonal loss). Abnormal staining results consist of complete loss of staining in the tumor cells, in the presence of retained staining in normal (non-tumor) cells, which serve as an internal control. An abnormal overall result may qualify patients for immune checkpoint inhibitor treatment, in the appropriate clinical setting.

Genetic counseling is recommended for the interpretation of all results.

Assay is performed on formalin fixed paraffin-embedded tissue. Antibody clone for MLH1 is ES05, MSH2 is FE11, MSH6 is EP49, and PMS2 is EP51. Detection system is a proprietary polymeric HRP.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Mismatch Repair by IHC with MLH1

Normal

Mismatch Repair by IHC with MSH2

Abnormal

**H=High, L=Low, \*=Abnormal, C=Critical**

Mismatch Repair by IHC with MSH6                      Abnormal

Mismatch Repair by IHC with PMS2                      Normal

Client Case or Ref #                                              ██████████

MSI Tissue Source                                              R Colon

| VERIFIED/REPORTED DATES          |               |                  |                  |                   |
|----------------------------------|---------------|------------------|------------------|-------------------|
| Procedure                        | Accession     | Collected        | Received         | Verified/Reported |
| Mismatch Repair by IHC, Result   | 23-118-400023 | 00/00/0000 00:00 | 00/00/0000 00:00 | 00/00/0000 00:00  |
| Mismatch Repair by IHC with MLH1 | 23-118-400023 | 00/00/0000 00:00 | 00/00/0000 00:00 | 00/00/0000 00:00  |
| Mismatch Repair by IHC with MSH2 | 23-118-400023 | 00/00/0000 00:00 | 00/00/0000 00:00 | 00/00/0000 00:00  |
| Mismatch Repair by IHC with MSH6 | 23-118-400023 | 00/00/0000 00:00 | 00/00/0000 00:00 | 00/00/0000 00:00  |
| Mismatch Repair by IHC with PMS2 | 23-118-400023 | 00/00/0000 00:00 | 00/00/0000 00:00 | 00/00/0000 00:00  |
| Client Case or Ref #             | 23-118-400023 | 00/00/0000 00:00 | 00/00/0000 00:00 | 00/00/0000 00:00  |
| MSI Tissue Source                | 23-118-400023 | 00/00/0000 00:00 | 00/00/0000 00:00 | 00/00/0000 00:00  |

END OF CHART

H=High, L=Low, \*=Abnormal, C=Critical

Unless otherwise indicated, testing performed at: