

PATHOLOGY DIAGNOSIS:

PATHOLOGICAL REPORT OF IMMUNOHISTOCHEMISTRY TESTING FOR MISMATCH REPAIR DEFICIENCY PROTEIN EXPRESSION (MMR)

Specimen: Formalin-fixed paraffin-embedded tissue (FFPET)
Specimen number: S67-538-B13
Clinical diagnosis: Colorectal adenocarcinoma
Clinical indication: Screening for MSI-H neoplasm
Testing method: (Ventana MMR Rx Dx Immunohistochemistry for MLH1 (M1), MSH2 (G219-1129), MSH6 (SP93), and PMS2 (A16-4) protein expression (CDx))
Result
ProteinResult
MLH1Intact nuclear expression
MSH2Intact nuclear expression
MSH6Intact nuclear expression
PMS2 Intact nuclear expression

Interpretation: Proficient MMR (pMMR)

Criteria for interpretation of MMR protein expressionIntact Protein Expression: Unequivocal nuclear staining in viable tumor cells, in the presence of acceptable internal nuclear positive control
Loss of Protein expression: - Unequivocal loss of nuclear staining or focal weak equivocal nuclear staining in viable tumor cells, in the presence of acceptable internal nuclear positive control- Puntate nuclei expression, cytoplasmic staining without nuclei expression
***** Note: The presence of MSI-H/deficient mismatch repair may also be an indication for additional testing for Lynch syndrome and genetic counseling.
Reference: 1. Vikas, Praveen, et al. Mismatch Repair and Microsatellite Instability Testing for Immune Checkpoint Inhibitor Therapy: ASCO Endorsement of College of American Pathologists Guideline. Journal of Clinical Oncology(2023): JCO-22.2. Umar A, Boland CR, Terdiman JP, Syngal S, de la Chapelle A, RƧnschoff J, et al. Revised Bethesda Guidelines for Hereditary Nonpolyposis Colorectal Cancer (Lynch Syndrome) and Microsatellite Instability. J Natl Cancer Inst. 2004 Feb 18;96(4):26118.3. Bartley, Angela N., et al. Mismatch repair and microsatellite instability testing for immune checkpoint inhibitor therapy: guideline from the College of American pathologists in collaboration with the association for molecular pathology and fight colorectal cancer. Archives of pathology and laboratory medicine146.10 (2022): 1194-1210.

GROSS EXAMINATION:

A pathological request for MMR protein on block number S67-00538.

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ACCREDITED TEST

Histochemistry : HTE, AFB, PAS, GMS, MUCIN, PAM, Reticulin, Masson Trichrome

Immunohistochemistry : ER, PR, HER-2, MMR Protein, Ki-67, Cytokeratin 7, Cytokeratin 20, P40, TTF-1

Molecular pathology : Her-2 gene, EBER, KRAS, NRAS, EGFR

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