



ddPCR™ Microsatellite Instability (MSI) Kit

Simple, Automated Sample Analysis with Tissue and Plasma Samples

Microsatellite instability (MSI) is a state of genetic hypermutability due to a compromised mismatch repair (MMR) system. MSI is associated with an increasing number of cancers and is a critical biomarker for immune checkpoint inhibitor research and therapies.

Bio-Rad's cutting-edge MSI kit uses Droplet Digital™ PCR (ddPCR) technology for sensitive, reproducible, and rapid assessment of five key MSI markers. The ddPCR MSI Assay can be used to analyze formalin-fixed paraffin-embedded (FFPE) samples without the need for a matched normal tissue, as well as circulating tumor DNA (ctDNA) from plasma, reducing the need for invasive biopsies. The ability to leverage the same assay and the QX200™ or QX600™ Droplet Digital PCR System for both FFPE and plasma, combined with the capacity to complete testing in as little as 1 day, enables expedited answers and reflex testing. Bio-Rad's ddPCR MSI Kit has the speed, sensitivity, and reproducibility to meet your laboratory MSI testing needs.



Test Tissue and Plasma



Evaluate MSI markers in both tumor and plasma samples

Look Beyond Colorectal Cancer (CRC)



Evaluate MSI in non-CRC samples using tissue or plasma

Eliminate the Need for Matched Normal Tissue



Save reagents and valuable reaction space

Access Automated Analysis and Clear Results



Obtain clear, consistent, and objective results; no special training required



Sensitive and Specific

100% Sensitivity
>96% Specificity

Independent study using
FFPE compared to PCR-CE

Minimal Input Required

2 ng/10%

Accurate results with minimal input
and tumor content

Data in Less Than 6–7 Hours



~5.5 hr on QX200 System
~6.5 hr on QX600 System

MSI Kit Concordance in Both Colorectal Cancer (CRC) and Non-CRC Cancers

Site	Sample Type	Diagnosis	Number	MSI-H	MSS	MSI Status Concordance, %	Original Methods
1	FFPE	CRC	10	5	5	100	PCR-CE
	Plasma	CRC	8	2*	6	87.5	PCR-CE (matched tissue)
2	FFPE	CRC	10	5	5	100	IHC and PCR-melt
	Plasma	CRC	33	1	32	100	IHC and PCR-melt (matched tissue)
3	FFPE	CRC	16	9	7	100	PCR-CE
	FFPE	Non-CRC**	12	3***	9†	100	PCR-CE and/or IHC

Data were collected using the QX200 Droplet Digital PCR System. FFPE, formalin-fixed paraffin-embedded; IHC, immunohistochemistry; MSI-H, microsatellite instability high; MSS, microsatellite stable; PCR-CE, polymerase chain reaction–capillary electrophoresis.

* Low input nucleic acid (0.53 ng instead of nominal 2.6 ng) may explain the discordance in this ddPCR result.

** Non-CRC samples included endometrial, adrenal, metastatic cervical, prostate, pancreatic, duodenal, gallbladder, esophageal, lung, and gastric cancer tissue.

*** MSI-H adrenal sample detected by IHC but not PCR-CE.

† BAT26 detected by Droplet Digital PCR but not detected by PCR-CE for pancreatic and esophageal samples.

The ddPCR Microsatellite Instability (MSI) Kit includes:

- ddPCR Multiplex Supermix (2 vials)
- ddPCR MSI Assay 1 (BAT25/BAT26)
- ddPCR MSI Assay 2 (NR21/NR24)
- ddPCR MSI Assay 3 (MONO27)
- ddPCR Positive Control
- Uracil-DNA Glycosylase (UDG)
- Nuclease-Free Water (2 vials)

Ordering Information

Catalog #	Description
12015172	ddPCR Microsatellite Instability (MSI) Kit

Visit [bio-rad.com/ddPCR-MSI](https://www.bio-rad.com/ddPCR-MSI) for more information.

For Research Use Only. Not for use in diagnostic procedures.



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