

## ddPCR™ Microsatellite Instability (MSI) Kit

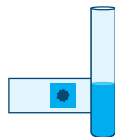
Simple, Automated Sample Analysis with Tissue and Plasma Samples



Microsatellite instability (MSI) creates a state of genetic hypermutability due to compromised mismatch repair (MMR). This results in the generation of short tandem DNA repeat sequences throughout the genome. 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 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™ 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.

### No Normal Tissue Needed



Save reagents and valuable reaction space.

### Automated Analysis and Easy Interpretation



Data interpretation is clear, consistent, and objective. No special training needed.

## Sensitive and Specific

**100% Sensitivity**  
**>96% Specificity**

Independent study using  
FFPE compared to PCR-CE.

## Minimal Input Required

**2 ng/10%**

Obtain accurate results with  
minimal input and tumor content.

## Data in Less Than 6 Hours



Obtain a full plate of results from  
DNA for all five markers in ~5.5 hours.

## MSI Kit Concordance in Both 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	38	1	37	100	IHC and PCR-melt (matched tissue)
3	FFPE	CRC	16	9	7	100	PCR-CE
	FFPE	Non-CRC**	12	3***	9†	100	IHC and PCR-CE

Across three sites, MSI performance was compared to original methods, displaying high concordance for both CRC and non-CRC samples.

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, gall bladder, esophageal, lung, and gastric cancer tissue.

\*\*\* MSI-H adrenal sample not detected by 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 aliquots)
- 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 aliquots)

## 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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