MODAPLEX MSI Analysis Kit

Discover the hypermutated state

Mononucleotide Marker	Dinucleotide Marker
Bat-25	D5S346
Bat-26	D17S250
NR-21	
NR-24	
Mono27	

FEATURES

- Simultaneous analysis of five quasimonomorphic mononucleotide and two dinucleotide markers for the assessment of the dMMR status
- Evaluate the instability by visual comparison of allelic peak shapes from tumor and adjacent native tissue.
- Minimized peak stuttering effects allow the customer to detect minor changes in size

AN IMPROVED TESTING WORKFLOW

- Take advantage of an easy and fast workflow with 4 h turnaround time
- Include forensically accepted (human insertion/deletion polymorphism) marker as sample mix-up control
- Use the MODAPLEX Reporter software for an intuitive manual MSI assessment
- Verified with artificial material and tested on FFPE-derived colorectal and endometrial cancer material

POWERFUL MODAPLEX PLATFORM

- High multiplexing grade in a single well
- Universal PCR program for running all three assays on one plate simultaneously
- The MODAPLEX setup is as straightforward as setting up a PCR
- Simple analysis with the intuitive MODAPLEX Reporter software

www.modaplex.biotype.de

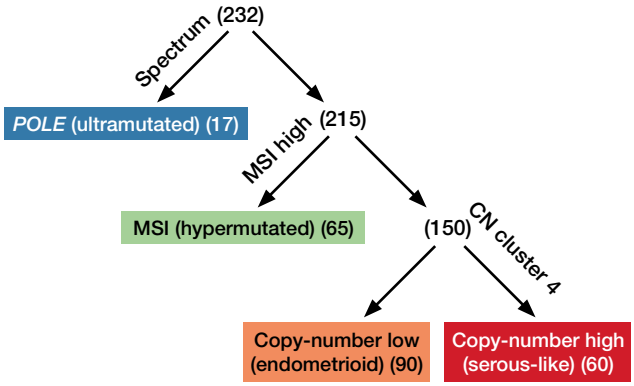
BIOTYPE

Microsatellite instability (MSI) testing

Microsatellite instability (MSI) occurs when the DNA mismatch repair is defective (dMMR) resulting in frame-shifts in the repeat sequences of the microsatellites which can be detected. The presence of MSI is also an indicator for a high mutational burden due to mutational rates of 10-100 mut/Mb (hypermutation)[1]. The marker, initially clinically implemented through the Bethesda Guidelines (1998, 2002) for the identification of patients with Lynch Syndrome, become relevant as a positive prognostic marker patients with colorectal and endometrial cancer[2, 3, 4, 5].

Additionally, tumors with defective MMR show a strong response to immune-checkpoint inhibitors and consequently immuno-checkpoint therapies have been approved both by the FDA and EMA for a range of cancer entities that have been characterized as MSI high[6,7].

When the Cancer Genome Atlas Research Network (TCGA) performed an integrated genomic, transcriptomic, and proteomic characterization of endometrial carcinoma, MSI was identified as a biomarker one of the four subgroups[5]. This molecular classification has now been incorporated into endometrial carcinoma guidelines, published by the European Society of Gynaecological Oncology (ESGO), the European Society of Pathology (ESP) and ESMO[8,9].



Adapted from Levine et al (10) 10.1038/nature12113

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5 Kandoth et al., Integrated genomic characterization of endometrial carcinoma. Nature 497, 67–73 (2013).
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7 Eso et al., Microsatellite instability and immune checkpoint inhibitors. J. Gastroenterol. 55, 15–26 (2020).
8 Concin et al., ESGO/ESTRO/ESP guidelines for the management of patients with endometrial carcinoma. Int. J. Gynecol. Cancer 31, 12–39 (2021)
9 Oaknin et al., Endometrial cancer. Ann. Oncol. 33, 860–877 (2022).
10 Levine et al., The Cancer Genome Atlas Research Network. Integrated genomic characterization of endometrial carcinoma. Nature 497, 67–73 (2013).

ORDER INFORMATION

Product	Size	Cat. No.	Status
MODAPLEX MSI Analysis Kit	50 reactions (25 sample pairs)	85-10701-0050	RUO*

*RUO - Research Use Only products must be validated by the customer with clinically relevant material for diagnostic purposes.

Direct your orders via email to **sales@biotype.de**