

Tapestri Single-Cell DNA Multiple Myeloma Panel

Advance your understanding of the clonal heterogeneity and evolution underpinning multiple myeloma (MM) with a 339-amplicon MM panel for single-cell sequencing. Curated based on input from global key opinion leaders in multiple myeloma and peer-reviewed studies, this panel offers a comprehensive coverage of genomic and clonotypic variations associated with MM including the most common mutations in driver and therapy-resistance genes, as well as indels, mutational zygosity, focal copy number aberrations, and BCR IgH/IgK/IgL gene rearrangements. This panel has been verified in a wet lab to meet performance specifications.

Panel Specifications

Metric	Value
Number of genes	- 47 genes associated with multiple myeloma hotspot and therapy resistance mutations - 10 genes with focal copy number aberrations - CDR3 region of the IgH, IgK, and IgL chains
Target type possible	SNVs, Indels, LOH, ITDs
Number of amplicons	339
Amplicon length	190 - 270 bp
Panel uniformity: % of amplicons >0.2x mean	≥90%
Panel size	60.9 kb
% of amplicons with high GC Content	7.9%
Recommended number of reads per run	227 M

13 GENES WITH RESISTANCE MUTATIONS

CD38	CRBN	CUL4B	FCRL5	FRG1
FRMPD3	GPRC5D	NR3C1	OGT	RARA
TNFRSF17	TRAPPC8	UNC13	-	-

Genes associated with therapy resistance in multiple myeloma curated based on consultation with global experts and publications.

LEARN MORE

<https://designer.missionbio.com/catalogpanels/MM>
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Datasheet_MissionBio_MM_RevE

Tapestri Single-Cell DNA Multiple Myeloma Panel (continued)

34 GENES WITH HOTSPOT MUTATIONS

ACTG1	ATM	BRAF	CCND1	CCND3
CDKN1B	CDKN2C	CYLD	DIS3	EGR1
EZH2	FAM46C	FGFR3	IDH1	IDH2
IKZF1	IRF4	KRAS	LTB	MAF
MAX	MYC	NFKBIA	NRAS	PRDM1
PTPN11	RB1	SF3B1	SLAMF7	SP140
TP53	TRAF2	TRAF3	XBP1	-

Driver genes commonly associated with multiple myeloma curated based on consultation with global experts and publications.

10 GENES WITH FOCAL COPY NUMBER ABERRATIONS

ATM / BIRC2/3 (11q22.3)	CDKN2A/B (9p21.3)	CDKN2C (1p32.3)	EV15 / RPL5 (1p22.1)	FAM46C / TENT5C (1p12)
GPRC5D / CDKN1B (12p13.1)	MYC (8q24.21)	RB1 (13q14.2)	TNFRSF17 (16p13.13)	TP53 (17p13.1)

Genes with focal CNAs commonly associated with multiple myeloma curated based on consultation with global experts and publications.

V(D)J CLONOTYPE

TARGETS	# OF FWD / REV PRIMERS	# OF V/J GENES TARGETED
BCR-IGH	38/5	8 V subgroups (447/450 alleles)
BCR-IGK	15/4	6 J subgroups (13/13 alleles)
BCR-IGL	20/5	7 V subgroups (126/126 alleles)

Forward and reverse primers targeting the CDR3 region of the IgH, IgK, and IgL chains.

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