

Tapestri Single-Cell DNA Myeloid Panel

Target SNVs and indels across **45 genes with 312 amplicons** for relevant mutations designed to cover a comprehensive set of myeloid disorders including acute myeloid leukemia (AML), myeloid dysplastic syndrome (MDS), myeloproliferative neoplasms (MPN), chronic myeloid leukemia (CML), chronic myelomonocytic leukemia (CMML), and juvenile myelomonocytic leukemia (JMML).

Panel Specifications

Metric	Value
Number of genes	45
Number of targets	1,197
Target type possible	SNVs, Indels, CNVs, LOH
Number of amplicons	312
Coverage	99.0%
Panel size	~65 kb
Amplicon length	125 - 375 bp
Panel uniformity: % of amplicons >0.2x mean	>=90%
Amplicon completeness: % of amplicons in >80% of cells	>=80%
Cell completeness: % of cells with >80% amplicons above 10 reads	>=80%
Verified NGS systems	MiSeq, NextSeq, HiSeq, NovaSeq
Recommended number of reads per sample	~188 M

Table 1: Panel specifications.

45-GENE MYELOID PANEL

ASXL1	ERG	KDM6A	NRAS	SMC1A
ATM	ETV6	KIT	PHF6	SMC3
BCOR	EZH2	KMT2A	PPM1D	STAG2
BRAF	FLT3	KRAS	PTEN	STAT3
CALR	GATA2	MPL	PTPN11	TET2
CBL	GNAS	MYC	RAD21	TP53
CHEK2	IDH1	MYD88	RUNX1	U2AF1
CSF3R	IDH2	NF1	SETBP1	WT1
DNMT3A	JAK2	NPM1	SF3B1	ZRSR2

Table 2: Panel gene targets.

Panel Performance

Metric	Value
Panel uniformity	98.4%
Amplicon completeness	87.2%
Cell completeness	97.6%
Cells recovered	4,782
% reads mapped to genome	92.4%
% reads mapped to targets	84.2%
% reads mapped to cells	79.6%

Table 3: Panel performance. Data generated from a pure Raji cell line.

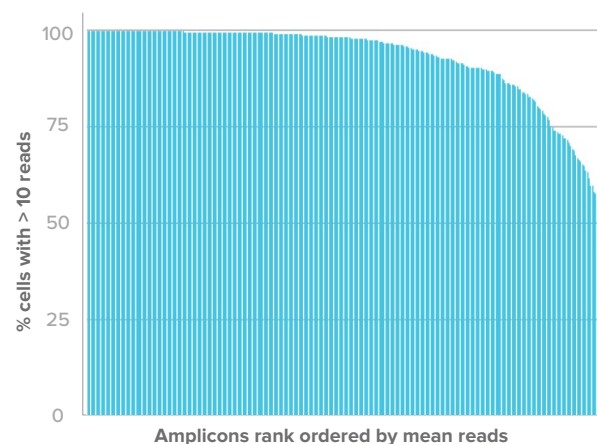


Figure 1: Cell completeness per amplicon.

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Panel Targets

Gene	Exon	Protein-level Variants	cDNA Variants
ASXL1	12	G646; G652; E657; G658; G679; Q733; Q748; Q768; L775; Q778; W796; P808; Q829; K838; Q858; K909; G927; T957; W960; R965; G967; D1004; S1028; Q1039; Q1063; R1068; E1102; L1107; S1168; S1169; E1228; E1241; P1259; R1273; S1275; L1395; G1397; R1415; A1507	
ATM	40	N1983; I1986; S1988; L1989; E1991; G1998	
	63	R3008; M3011; R3047; G3051	
BCOR	4	A58; K100; R243; P248; V253; P264; R342; P346; S355; G421; N521; S526; R540; G549; P602; A617; E630; P654; Y657; P670; L696; L702; E756; T759; L760; S897; F977; E994	
	5	E1001; C1010; A1013	
	7	Q1110; R1131; R1136; R1164	
	8	S1189; K1207; R1217; W1218; R1268	
	9	A1314; Q1322; K1325; A1344; Q1371; R1374; R1375	
	10	S1405; R1447	
	11	N1459; N1491; R1514	
	12	D1536; R1547; K1577	
	13	C1606	
	14	P1621	
BRAF	1	G8; E13; E26	
	2	H60; G69; H72	
	3	S102; T119	
	6	T241; G258; R271	
	7	F294; E304; A305; T310; I326	
	9	Q386; R389	
	10	P403; L406; S419; Q423	
	11	G464; G466; S467; G469; V471; Y472	
	12	K483; L485; N486; E501; L505	
	13	T529; W531; H539; H542; R558	
BRAF	15	N581; D594; F595; G596; L597; T599; V600; K601	
	16	D629; Q636	
	CALR	9	E364; K374; K385; E386
CBL	7	R343	
	8	Y371; L380; C381; C384; C396; H398; C404	
	9	C416; P417; F418; R420; P433	
CBL	Intron		c.1096-1G>C; c.1228-2A>G
	CHEK2	12	K416; M424; Y433; S441; W454
16		R562; R562; R564; R566; P579	
CSF3R	14	R583; T615; T618	
	15	S624; G634; T640	
	17	G683; M696; T717; E737; Q766; Q768; Q770; Q776; Y779; S810	
DNMT3A	1	P2; R19; D22	
	3	D92; P99; E119; A122	
	9	A218; G223; Q231; V265	
	10	R288; W305; W313; R320	
	11	L344; A353; Q356; Q362	
	12	A380; Q402; W409; A410	
	13	E434; W440; Y448; K464	
	14	P465; R484; E491	
	15	N501; E505; M513	
	16	Y533; G543	
	17	V563; W581; R598; Q606	
	18	R635; V636	
	19	G685; R688; V690	
	20	G699; I705; C710; S714; V716; N717; Y724	
	21	R729; Y735; R736; R749; R771	
22	I780; R792; P799; M801; R803		
23	L815; E820; H821		
24	T835; N838; Q842; W860		
25	W893; P904; F909; A910		
ERG	10	L313; Q315; E319; D345; D363; G394	
ETV6	1	Q7; C8	
	2	R14; S16; P19; P25; R39; R55	
	3	E76; S78; E100; R103; R105	
	4	H135; E145	

Table 4: Panel content. Exon numbers are curated from UCSC Genome Browser by collapsing the exons in the forward strand by start and stop site and then numbering the exons from 5' -> 3' end with the first exon at 5' end representing Exon 1.

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Panel Targets (cont'd)

Gene	Exon	Protein-level Variants	cDNA Variants
ETV6 (cont'd)	5	N156; R181; R202; P204; R210; P214; R217; R222; N228; E250; R259; Q260; R309; D311; M319; P324; E327	
	6	S352; R359; R369; R378; G381; H383	
	7	Y391; R396; R399; Y401; Y402; K403; K409; L415	
	8	R430; R433	
EZH2	2	V13; R16; R25	
	3	I55; R63	
	4	R78H; N102S; A103V	
	5	G135; F145; G159	
	6	D185	
	7	R213; R216	
	8	E246; E249; A255; R288	
	9	N322	
	10	R347	
	11	E396; Q420; S443; T467	
	12	R502	
	13	K515	
	14	S538; C548; K550	
	15	T573; P577	
	16	V626; S644; Y646	
	17	Q653; A656; G660; D664; M667; N675	
	18	V679; A682; R684; R690; N693; S695	
	19	E725; Y731	
	20	E745	
	Intron		c.2195+1G>A
FLT3	14	V491; Q494; I507; S519; S531; Y572; L576; Q580; V592; F594; Y599	
	15	G617; S618; A627; S638; M659; K663; M664; N676; A680	
	20	L832; R834; D835; I836; D839; N841	
GATA2	4	A318; G320; L321; H323; R330	
	5	L359; R361; R362; A372	
GNAS	8	D839; R842; R844	
IDH1	4	G70; R100; R132	
IDH2	4	R140; R172	
JAK2	12	F537; R541; N542; E543	
	14	L611; V617; C618	

Gene	Exon	Protein-level Variants	cDNA Variants
KDM6A	3	A112	
	4	A115; Q117; Q123; Y126; K128	
	6	R165; R172; L187	
	8	A212	
	9	Q240	
	10	Q271; K275	
	11	S295; V300; Q301; K313; W321	
	13	A437	
	15	R481; R484; M505	
	16	I598; V607; Q611; R621; W632	
	17	Q679; T703; Q710; H733; M754; T755; T794; Q863	
	20	E999	
	23	K1097; E1102; R1111; S1114; Q1133; G1140	
	25	W1194; V1205G Q1212; G1223; Q1229	
	26	R1255; Y1256; R1279	
	27	Q1302; G1314; G1321	
28	R1351; G1367; Q1377; Y1387		
KIT	2	R49; V50; D52; E53; V64	
	8	Y418; D419	
	9	P468; S476; E490; K509; N512	
	10	V560; E561; D572; P573; L576; P577; D579; W582	
	13	R634; K642; V654; N655	
17	R796; D816; K818; D820; N822; Y823; V825		
KMT2A	3	R478; R503; H708; R736; R745; P773; S774; S783; S802; Q814; S859; R862; R886; P907	
	7	K1218; T1245; P1252	
	9	I1393N; D1396N	
	10	E1412; E1416; L1423; I1428	
KRAS	2	G12; G13; V14; L19; Q22	
	3	T58; A59; G60; Q61; E63	
	4	E98; D108; N116; K117; A130; S136; G138; P140; E143	
MPL	10	W515; S505	

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Panel Targets (cont'd)

Gene	Exon	Protein-level Variants	cDNA Variants	
MYC	2	P17; S21; F22; N24; Y27; A59; T73; P74; P75; F153; S161; L164; A180; S241; S264		
	3	D273; Q321; H322; L348		
MYD88	4	M227; Y235; S238		
	5	T289; W294; R296		
NF1	2	Y49; T59		
	7	W221; N222		
	8	D254; E258; W267		
	10	R385		
	11	R416		
	12	D424; G453; R461		
	17	Q616; R652		
	18	S749		
	19	R765; E767		
	20	T780; H781; Q786		
	21	C845; E872		
	22	T958; Q959		
	24	V1042; W1048		
	27	Q1174; L1183		
	28	A1240; R1241; R1276		
	29	R1306; W1314		
	30	R1362		
	35	R1534		
	37	L1623; V1627		
	38	A1767; R1769; Q1806		
	39	Q1891		
	42	D2077		
	47	S2309		
	53	Q2589; Q2616		
	54	A2624		
	55	Q2697; Q2699		
		Intron		c.204+1G>A; c.204+1G>C; c.204+3_204+6delGAGT; c.730+2T>G; c.1260+1G>A; c.1260+1G>T; c.7869+5G>C; c.7869+5G>A
	NPM1	11	L287; W288; Q289; W290; L294	
NRAS	2	G12; G13; A18		
	3	G60; Q61		
PHF6	2	M1; S2; R24; C45		
	4	Y105; R116		

Gene	Exon	Protein-level Variants	cDNA Variants
PHF6 (cont'd)	5	K132; E139; A140	
	6	R163; N171	
	7	R225; H239; C242	
	8	D262; R274; G275	
	9	G287; C297; I314	
	10	H329; G348; Q359; N363	
	Intron		c.586-1G>T; c.834+1G>C
PPM1D	6	S446; R552	
PTEN	15	H93; G129; R130; G132; C136; Y155	
	17	Q214; S229; R233; E242; Q245; P246; K267	
	Intron		c.635-1G>A
PTPN11	3	N58; G60; D61; E69; F71; A72; T73; E76	
	7	R265; Y279; I282	
	12	A461; T468	
	13	P491; R498; S502; G503; Q510; T511; R512	
RAD21	6	G164; R168; S175	
	7	G239; D262; D263; S271	
	10	L393; A410; L413; D429; Q432; R437	
	11	D484; E486; P490	
RUNX1	2	E8; S12; M18	
	4	L56; A66; L98; S100; W106; R107	
	5	S141; L161; R162; G165; R166; P247	
	6	D198; R201; R204	
	7	R232; T246; R250; Q266; M267	
	8	P298; S314; R320; S322	
	9	P357; A391; Q397	
	Intron		c.805+1G>A; c.508+1G>A;
	SETBP1	4	S376; E858; S867; D868; G870; I871; P906; V1101; P1130; Q1244; E1247; D1269; S1287; S1330
SF3B1	13	V576; R590; E592; R594; E595	
	14	E622; Y623; R625; N626; H662; T663; K666	
	15	K700; V701; R702; I704; E722	
	16	G742; A744; G751; L773; R775	
	17	E809; P812; R828	

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Panel Targets (cont'd)

Gene	Exon	Protein-level Variants	cDNA Variants
SMC3	13	R381; N435	
	19	R661; G662	
	25	S994; M1015	
	28	I1171; A1183	
SMCIA	11	R586	
	16	I819; K829; K853	
	17	K854; R895; G899	
	Intron		c.2563-1G>A
STAG2	5	R69; K92	
	6	W102	
	7	F136; Q140; R146; D153; E154	
	8	S156; Q167; V181; R184; L221; A222	
	9	M224; T228; L235; L237; N240; E251; R271; E273	
	20	Y636; I646; S653; Q656; D663; K664; E675	
	25	Q801; S804; Y815; D845	
	29	E984; L997; R1012	
	30	R1033; R1045; S1058; T1079	
Intron		c.819+39C>A	
STAT3	20	S614; E616; G618	
TET2	3	C25; P29; L34; Q80; Q108; E135; S152; Q185; V218; H222; Q232; Q317; Q321; Q323; Q324; Q325; S354; G355; P363; Q383; Q414; Q417; S460; S466; Q481; R544; R550; P555; Q557; P562; Q622; Q635; Q652; Q654; H682; Q758; Q769; S794; Q810; R814; F868; Q876; Q913; G898; W954; Q958; Q963; Q966; Q1020; Q1053; S1059; Q1068; Q1083	
	4	E1144; Y1148; N1156; R1167	
	5	Q1170; Q1191; E1178; W1198	
	6	R1214; R1216; C1221; V1227; Y1245; Y1255; R1261; R1262	
	7	C1271; F1287; G1288; C1289; Y1294; C1298; E1318	
	8	L1322; E1323; Q1327	
	9	A1355; L1340; R1359; R1366; C1378; H1380	
	10	R1404; R1465; S1486	
	11	A1505; R1516; Q1539; Q1548; Q1624; Q1702; V1718; L1721; I1762; H1778; L1819; Q1828; G1861; H1868; G1869; S1870; I1873; H1881; T1884; P1889; P1894; S1898; H1904; P1962; R1966	

Gene	Exon	Protein-level Variants	cDNA Variants	
TP53	4	D3; L4; D9; D10; E17; R26; P33; V34; W52; S55; R71; A80		
	5	S88; K93; C102; W107; P112; P113; V118; R119; A120; Y124; R136; C137; H140		
	6	Q153; L155; I156; R157; Y166; R174; H175; V177; P180; Y181; P184; L204; C207; I211; S213		
	7	Y195; Y197; M198; C199; S202; M204; G206; R209; R210; I212		
	8	V233; R234; A237; P239; R241; R243; E246; E247; E259; R267		
	9	Q278; Q292		
	10	R298; R303; E319; S327		
	11	G335; Q336; S337; F346		
	Intron		c.-83C>A; c.-97T>A; c.-110A>G; c.-22+1G>A; c.-15T>A; c.876+1G>A	
	U2AF1	2	I24; R28; H29; S34; R35	
		6	W134; P139; R156; Q157	
WT1	7	R374; R385; S386; A387; N404; K405; R406; S411; Q414		
	8	R435; R439		
	9	G452; R463; R467; D469; H470		
ZRSR2	2	R27; R36		
	3	E48		
	4	E93; A95		
	5	E123; R126; E133		
	6	A143		
	7	R169		
	8	M211; Q213; Q235		
	10	C280; Q281; R295; P303; V304; R306		
	11	W340; E394; R433; G438; R452; R462; R464		

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