

Tapestri Single-Cell DNA CLL Panel

Advance your understanding of the genetic heterogeneity underpinning chronic lymphocytic leukemia (CLL) by targeting **32 genes with 274 amplicons** for single-cell sequencing. Covering a combination of oncogenes and tumor suppressor genes, this panel is designed to cover some of the most commonly mutated genes associated with CLL.

Panel Specifications

Metric	Value
Number of genes	32
Number of targets	1,277
Target type possible	SNVs, Indels, CNVs, LOH
Number of amplicons	274
Coverage	90.5%
Panel size	~53 kb
Amplicon length	175 - 275 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	~165 M

Table 1: Panel specifications.

32-GENE CLL PANEL

ATM	CHD2	FBXW7	NOTCH1	SPEN
BCOR	CREBBP	KRAS	NRAS	TP53
BIRC3	CXCR4	LRP1B	PLCG2	XPO1
BRAF	DDX3X	MAP2K1	POT1	ZMYM3
BTK	EGR2	MED12	RPS15	-
CARD11	EZH2	MYD88	SETD2	-
CD79B	FAT1	NFKBIE	SF3B1	-

Table 2: Panel gene targets.

Panel Performance

Metric	Value
Panel uniformity	98.5%
Amplicon completeness	86.5%
Cell completeness	94.0%
Cells recovered	8,160
% reads mapped to genome	95.4%
% reads mapped to targets	93.4%
% reads mapped to cells	76.8%

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

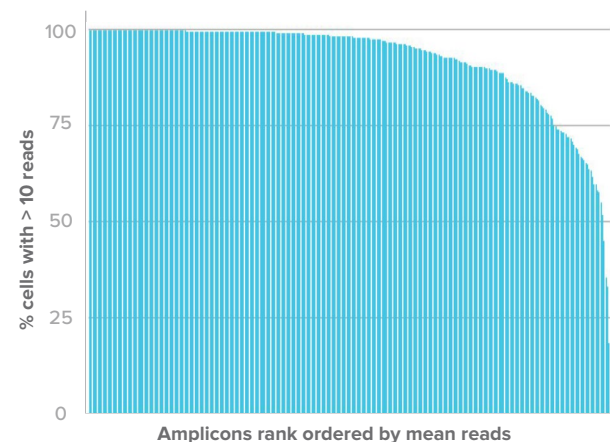


Figure 1: Cell completeness per amplicon.

LEARN MORE

<https://tapestri designer.com/catalogpanels/CLL>
+1 (415) 854-0058 | info@missionbio.com

Panel Targets

Gene	Exon	Protein-level Variants	cDNA Variants	
ATM	3	R35		
	4	E73		
	5	L120; LN121; Y123; S131; C141; W164	c.361_362insTG; c.364_370delAATTA-TA; c.477_481del	
	6	Q201	c.580_581insT	
	7	E223; L262; K293	c.838_842del	
	8	E304; W308; H325	c.1059T>A	
	9	Q374, P411		
	10	P424; L436; K468; L481; RG493; R521	c.1377_1377delT	
	11	L546		
	12		c.1875_1876del	
	13		c.1920_1921insA	
	15	T761; R772	c.2282_2283del	
	18	LC906		
	21	K1030		
	22	N1062; DNHH1080fs		
	23	S1105; E1133		
	24	Q1171		
	25	L1222; P1235		
	27	EL1346	c.4096_4097del	
	28	P1376		
	29	C1423; I1469		
	30	L1517; G1522		
	31	R1575; I1576	c.4638_4641del	
	32	SV1601; Q1620; 1624_1625HK>Q		
	34	D1682		
	35	G1746		
	36	I1804		
	37	P1843; S1857; R1875	c.5599delC	
	38	E1894		
	39	Y1938		
	40	L2001		
	41	Y2019; G2020	c.6019G>T; c.6027C>G	
	42	L2033; H2038; E2039; Y2049		
	43	Y2080	c.6219_6220delCT	
	44	H2125; S2127; L2135		
	45	E2164; E2181		
	ATM (cont'd)	47		c.6880G>A
		49	Y2398; Q2399; F2410; E2423; L2427; 2427_2429LRE>Q; K2431	
		50	Y2437; Q2442; L2445; L2450	c.7308de-IA; c.7313C>A; c.7327C>T
		51	Q2522; A2524	
		52	TL2556	c.7671_7674delGTTT
		53	R2598; A2626	
		55	G2695; K2717	
		56	D2720; D2721; D2725; V2727; V2731; F2732	
		58	Y2817; R2832; Y2833; F2839; P2842	
59		M2616; N2875; I2888; L2890		
60		V2892; G2891; G2919; G2925		
61		T2944; T2947		
62		V2951; Y2954; Y2969; Q2972		
63		N3003; A3006; R3008; G3030; M3011	c.9139C>T	
Intron			c.2921+1G>A; c.2921+1G>C; c.2921+1G>T; c.4777-2A>T; c.5178-1G>T; c.5178-1G>A; c.5320-2A>G; c.5320-2A>T; c.6572+1G>T; c.663-2A>G; c.72+2T>C; c.8011-1G>T; c.8988-1G>C; c.8988-1G>A;	
BCOR		4	E133; T200; P463; L487; Y657; Y985	c.1486_1487insT; c.433_434del; c.264_277del; c.2967_2971delT-CAGC; c.2443_2444insT; c.930_948delTAAG-CAGCCCAGGGTCC
		6		c.3090_3093del; c.3088_3089del
		7		c.3311delA
		9	E1348*	c.4140_4141del; c.4097_4100del; c.4038_4038delA; c.4038_4039delIAG
		10	N1425	c.4274A>G; c.4208C>G
		12	A1503	c.4720_4720delC; c.4619_4629delT-TATGGAAAAG

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.

LEARN MORE

<https://tapestridesigner.com/catalogpanels/CLL>

+1 (415) 854-0058 | info@missionbio.com

For Research Use Only. Not for use in diagnostic procedures.
© 2019 Mission Bio, Inc. All rights reserved.

DataSheet_MissionBio_CLL_RevB



Panel Targets (cont'd)

Gene	Exon	Protein-level Variants	cDNA Variants
BCOR (cont'd)	13	V1581	
	Intron		c.4429-1G>A; c.4429-1G>C
BIRC3	7	SP351; I427; R428; E429; E431	c.1138delC; c.1233_1237delAC-TAG; c.1262_1263insCAATGCAGAAAGAT-GAAATAAGGGAAG; c.1276_1277insA; c.1281_1288del; c.1282_1283insG; c.1290_1291insGA; c.1291_1292insA
	8	FQ455; H457; S467; S513; V520	
	9	T598; V599	
	10	P543; Q547; R549; Q552; E554; R555; K558; C557; C578; L585	c.1639delC; c.1641_1642insT; c.1642delT; c.1651_1652insT
	Intron		c.1580-61A>T; c.1580-24A>G
BRAF	11	G469	1397G>C; 1406G>C
	12	K483; E501	
	15	N581; D594; F595; L597; K601	1781A>G; 1799T>A; 1801A>G
	16	D638	
BTK	15	C481	
CARD11	3	E24; C49	
	4	R75; V90; E93; F97; R113; F115	
	5	G123; G126; T128; F130; T167; T169; R170; R179; D200; R207; K215; S222; R223	
	6	D230; N237; E241; L245; Q249; S250; L251; R260; R271	
	7	R292; E306; R337	
	8	D357; Y361; R364	
	Intron		c.-125-21889C>T
	CD98B	6	Y208
CHD2	2	LH15	
	3	P86	c.134_135insTG
	13	R485	
	15	R621	
	16	D617; H620; T645	
	17	L698; K702; K712	
	19	L793	

Gene	Exon	Protein-level Variants	cDNA Variants
CHD2 (cont'd)	20	R836	
	21	D860; R900	
	22	R914; QRM941	c.2806delG
	24	A1013	
	25	R1072	
	26	S1099	
	27	F1146	
	30	A1255; L1270	
	31	L1321	
	32	L1339	
	33		c.4165_4168del
	34	I1471	
	35	Q1485	
	36	F1543	
	Intron		c.4592+2T>G; c.-224+2379T>C; c.3066+1G>C; c.3596-20_4906+20del; c.417+252C>T; c.4413+1G>A
	CREBBP	13	
31			c.5825T>C
CXCR4	2	T342	c.1022_1023insT
DDX3X	1	Q15	
	2	S24	
	4	F52	
	6	P167; E180	
	7	R218	
	10	C298; P324; M330; R333	
	11	T369	
	12	S410; I415; Q417; S429	
	13	L445; G465	c.1470delA
	14	R528	
Intron		c.1026-1G>C	
EGR2	2	E356; H384; D411	
EZH2	9	N322	
FAT1	10	P2171	

LEARN MORE

<https://tapestridesigner.com/catalogpanels/CLL>

+1 (415) 854-0058 | info@missionbio.com

For Research Use Only. Not for use in diagnostic procedures.
© 2019 Mission Bio, Inc. All rights reserved.

DataSheet_MissionBio_CLL_RevB



Panel Targets (cont'd)

Gene	Exon	Protein-level Variants	cDNA Variants
FBXW7	2		c.43_44insCTC
	4	A215	
	5	F280	
	7	Q358; R367	
	8	R393	c.1161_1162delAC
	9	W425; G437; T463; R465	c.1394G>A
	10	R479; D480; W492; R505	c.1508delC; c.1436G>A
	11	G597; W606	c.1807_1855+75del
	12	R689	
	Intron		c.1419-448G>A; c.1419-530T>A; c.1419-866C>G; c.1418+974T>C; c.1418+769A>G; c.1418+679T>C; c.1418+154C>T; c.1418+109T>A
KRAS	2	G12; G13; Q22	c.34G>C; c.35G>A; c.35G>A; c.35G>C; c.38G>A; c.64C>A
	3	T50; T59; Q61; S65	c.176C>G; c.182A>G
	4	K117; A146	c.351A>C; c.351A>T; c.436G>C; c.437C>T
LRP1B	38		c.6148G>T
MAP2K1	2	F53; K57	c.171G>T
	3	C121; P124; G128	
	6	R201; E203	
MED12	1	E33; L36	95_97del
	2	Q43; G44; A59	
	8	L404	
	21	R696	
	25		c.3508C>T
	42	Q2072	
MYD88	2	Q143	
	3	G168; D184; R209; V217; S219	
	4	M232T; Y240C; S243N	
	5	*160; R264; L265; R301	c.659T>C; c.794T>C; c.*227A>T; c.*368delT; c.*407delG; c.*877delC; c.*962T>G; c.*1025T>C; c.*1084A>C; c.*1163A>G; c.*1304A>G; c.*1368G>C; c.*1514C>T; c.*1623T>C; c.*1698C>A; c.*1728C>T

Gene	Exon	Protein-level Variants	cDNA Variants
NFKBIE	1	T261	c.759_762del; c.677delG
	2		c.819_825del
	3	T296	
	5		c.1270_1271insATG
NOTCH1	16	T825	
	25	C1357; P1377; C1391; D1517; Q1527	
	26	L1574; V1578; L1585; F1592; L1593; L1596; R1598; L1600; P1641	
	27	V1676; L1678; I1680	
	28	R1758; P1770; R1783; R1784; G1788	
	34	R2104; S2163; K2177; K2181; Y2209; T2297; Q2440; Q2459; E2460; P2462; Q2487; Q2501; P2514	c.6827_6831del; c.6911T>A; c.6995_7011delCAG- GCCCCCTGAGCACA ; c.7318C>T; c.7330C>T; c.7353_7353delG; c.7369_7377CT- GCCCCAG>T; c.7375C>T; c.7388_7388delC; c.7388_7390CCC>G; c.7519_7529delCAC- CCCTTCCT; c.7541_7542del
		Intron	c.5130_5131insAG- CCTCAACATC- CCCTACAAGATC- GAGGCCGTGCA- GAGA
NRAS	2	G12; G13; S17	c.38G>A; c.35G>A; c.34G>A
	3	Q61	c.182A>G
	4	A146	
PLCG2	19	R665	
	20	S707; R742	
	24	L845	
	27	D993	
POT1	5	L3	c.1A>T
	6	N8; Q16; K33; Y36; S38; K39	c.347delC
	7	D42; S45; T58; S63; Y66; Y73; D77	
	8	Y89; Q94; L136; R137	
	9	W194; Y223; H226	
	10	Y242; H266; G268; G272; R273; G274	
	13		c.1072_1073insT

LEARN MORE

<https://tapestridesigner.com/catalogpanels/CLL>

+1 (415) 854-0058 | info@missionbio.com

For Research Use Only. Not for use in diagnostic procedures.
© 2019 Mission Bio, Inc. All rights reserved.

DataSheet_MissionBio_CLL_RevB



mission bio

Panel Targets (cont'd)

Gene	Exon	Protein-level Variants	cDNA Variants
POT 1 (cont'd)	14		c.1300_1301insA
	18		c.1781_1782del
	Intron		c.-39-2A>T; c.125-2A>G
RPS15	4	G96; G99; P98; S106; K112; A135; T136; P138; S139; G141; T143; H144; S145; S146; K152	
SF3B1	1	H8	
	6	A188	
	12		c.1606C>G
	13	E592; R594; E595	
	14	E622; Y623; R625; N626; V635; Q659; H662; T663; K666	c.1874G>A; c.1876A>G; c.1876A>T; c.1996A>G; c.1997A>C
	15	K700; V701; I704; A711; G740; K741	c.2098A>G
	16	G742; A744; L747; G751; Y752; 773_774insL; R775; P780; D781; K786	c.2225G>A
	17	E802; E809; P812; R828	
	19	T916; T935; R939; R957; M962	
	23	A1168	
	Intron		c.1438-2A>T
SETD2	3	C805	c.3460_3463del
	12	K1969	
	15		c.6299delA
SPEN	11	Q628; S2139	c.2591_2592delAA; c.2645_2645delG; c.3096_3099delAGGA; c.3259A>T; c.3441_3442del; c.3552_3553del; c.3703_3731del; c.3973_3977del; c.3984_3987delATCT; c.6762delG; c.7624A>T
TP53	4	E51; Q52; W53; W91; L111	c.232_233insA
	5	G115; R181; S127; L130; N131; A138; C141; V143; V147; P151; V157; R158; A159; A161; Y163; Q165; R170; V173; R174; R175; C176; H179; V186	c.261delC; c.410_411del; c.417delG
	6	K132; H193; I195; R196; V197; G199; Y205; R213; H214; S215; V216; Y220; C238	c.456_457insC; c.463_474del; c.469G>T; c.524G>A; c.528_528delC; c.534C>A

Gene	Exon	Protein-level Variants	cDNA Variants	
TP53 (cont'd)	8	272_274VRV>V; E271; R273; C275; A276; P278; R280; D281; 282_283insRQ; E286	c.695T>C; c.706_707insAC; c.721delT; c.742C>T; c.743G>A; c.747G>T; c.767_782CACTGGAAGACTCCAG>ACCGT	
	9	A307	c.818G>A; c.818G>C; c.830G>A; c.830G>T; c.842A>T; c.847_848insAGCCGG	
	10	R342	c.1024C>T; c.1028delA	
	11		c.*893C>T; c.*840C>A; c.*826G>A; c.*779delC; c.*772delT; c.*735C>A; c.*626C>T; c.*893C>T; c.*772delT; c.*569_570delGT; c.*565G>T; c.*544G>T; c.*826G>A; c.*448T>C; c.*387C>A; c.*382C>T; c.*346G>T; c.*544G>T; c.*327C>T; c.*565G>T; c.*544G>T	
	Intron		c.442+1G>C; c.442+1G>A; c.442+1G>T; c.556-2A>C; c.556-2A>G; c.556-2A>T; c.803-2A>C; c.803-2A>G; c.803-2delA	
	XPO1	15	E571	c.1711G>A
		16	D624	
		17	A636	
		20	A805	
	ZMYM3	2	P48; S53; Y87; S194	c.327_334delT-CAGACCC
		5	Q322	
6		Q399		
7		D434; C451		
8			c.1538_1539del	
9			c.1700_1701insT	
10			c.1784_1785insA; c.1750_1751delGA	
11			c.1836_1836delC	
16		P883; P887; P895		
17		V898		
20	W1062	c.3213G>A		
21	Y1113			
23	F1206; Q1227	c.3660delT		
24	F1290; S1305			

LEARN MORE

<https://tapestridesigner.com/catalogpanels/CLL>

+1 (415) 854-0058 | info@missionbio.com

For Research Use Only. Not for use in diagnostic procedures.
© 2019 Mission Bio, Inc. All rights reserved.

DataSheet_MissionBio_CLL_RevB

