

CancerScreen Panel

Core/50/100/400

Somatic Cancer

KEY FEATURES

1. Optimized panel for solid cancer	Assess DNA, RNA, and the whole CDS regions (RefSeq) of up to 407 genes and rearrangement regions associated with solid cancer
2. High sensitivity and specificity	Detect low-frequency and rare variants with high sequencing depths Capture the GC rich and homologous regions with Celeomics proprietary design technology
3. Cost-effective sequencing	Lower sequencing costs for 3 Gb sequencing amount compared to competitor product
4. Assess all variant types	Detect all mutation types including SNV, Indel, Large Indel, CNV, Rearrangement, MSI, and TMB in a single assay

SPECIFICATION

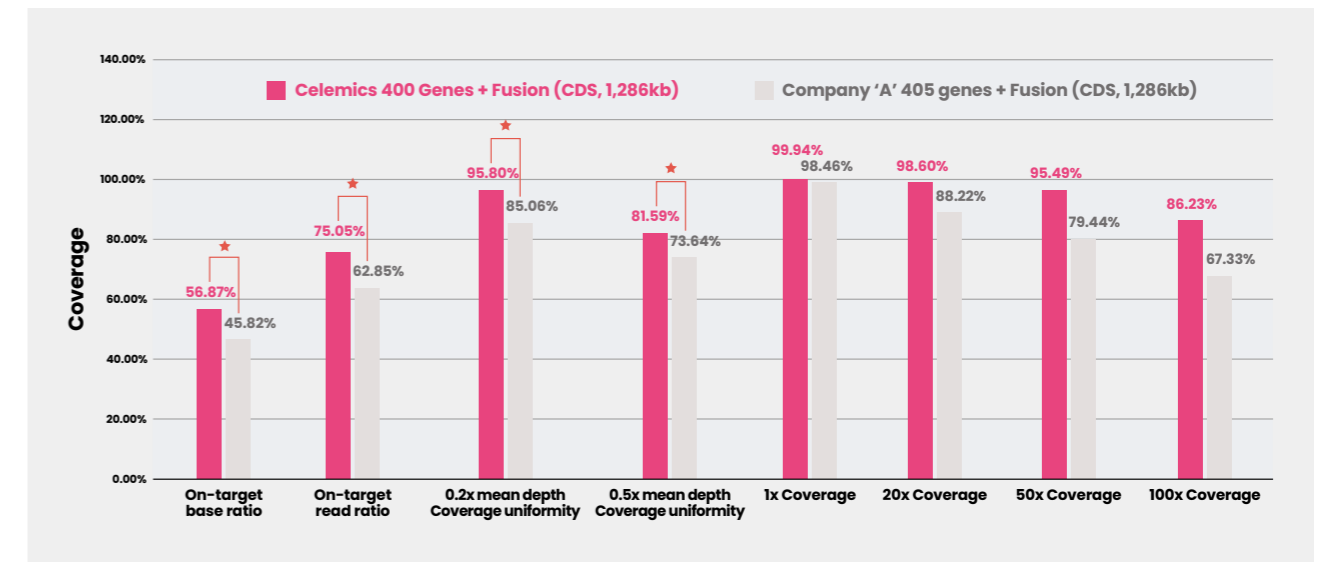
Gene count*	13 / 54 / 99 / 407 genes
Target size	61 / 197 / 299 / 1,123 kb + Rearrangement
Mutation type	SNV, Indel, CNV, Rearrangement, MSI, TMB
Sample type	FFPE, frozen tissue, cfDNA, RNA
Platform	All sequencers from Illumina, Thermo Fisher, MGI, PacBio, and Oxford Nanopore
Bioinformatics pipeline	Primary, Secondary and Tertiary analysis result (FASTQ to VCF, VCF to Clinical report)

* Gene Add-on Service: Genes can be added or removed by customer demand

PANEL PERFORMANCE

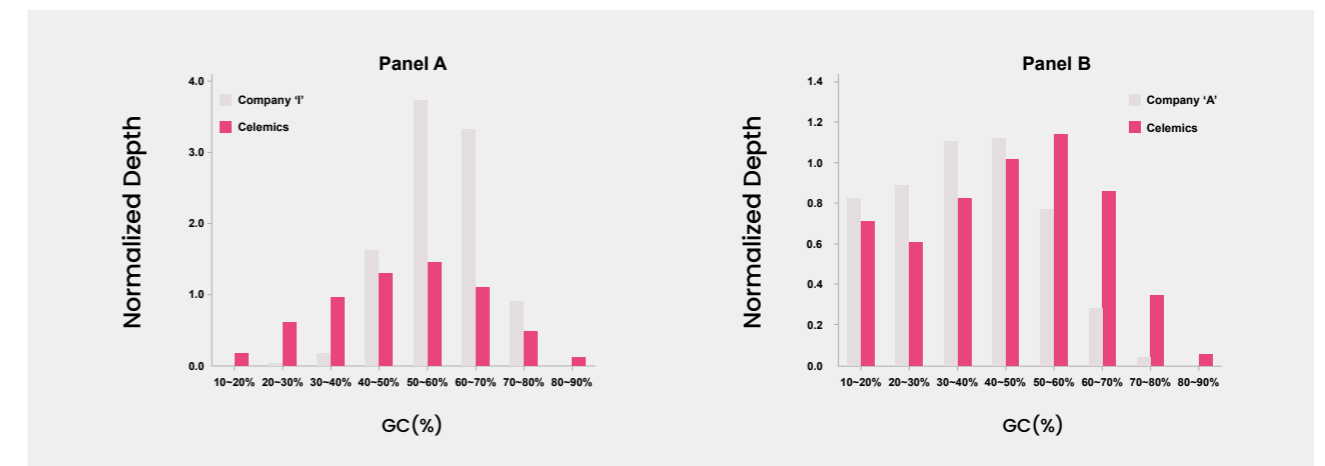
Performance Comparison with Competitor Product

Higher on-target ratio, uniformity, and coverage at 100X compared to competitor product over the target regions including exons and introns (Compared with the same sequencing depth)



Performance Comparison over GC-rich Regions

Higher uniform read depths over GC-rich regions compared to competitor product (Compared with the same sequencing depth)



PACKAGE COMPOSITION

Package name	Compositions		Package option	Options	
Target Enrichment	Target capture Probe	-	Pooling method	Single Reaction	Pre-capture Pooling
Standard	Target Enrichment reagents	Library prep Kit	Library Preparation kits	Standard Kit	EP-kit
All-In-One	-	Beads / Polymerase	Hybridization Enhancer	Included	Not included

CancerScreen Panel Core

DESCRIPTION

CancerScreen Panel Core is an NGS assay designed to detect all types of variants in 13 genes associated with somatic cancer. Targeting the selected genes with high sensitivity and specificity enables saving cost and effort. The report consists of the primary, secondary, and tertiary results for the In-depth understanding and interpretation of sequencing data.

GENE LIST

CancerScreen Panel Core	ALK	APC	BRAF	EGFR	ERBB2	KRAS	MET	NRAS	PIK3CA	RET	ROS1	SMAD4	TP53
-------------------------	------------	-----	------	------	-------	------	-----	------	--------	------------	-------------	-------	------

* Genes in bold indicate fusion analysis

CancerScreen Panel 50

DESCRIPTION

CancerScreen Panel 50 is an expanded NGS assay designed to detect all types of variants in over 50 genes associated with somatic cancer. Targeting the selected genes with high sensitivity and specificity enables saving cost and effort. The report consists of the primary, secondary, and tertiary results for the In-depth understanding and interpretation of sequencing data.

GENE LIST

CancerScreen Panel 50	ABL1	AKT1	ALK	APC	ATM	BRAF	BRCA1	BRCA2	CDHI	CDK4	CDK6	CDKN2A	CSFIR
	CTNNB1	DDR2	EGFR	ERBB2	ERBB4	ESR1	FGFR1	FGFR2	FGFR3	GNAI1	GNAQ	GNAS	HRAS
	IDH1	IDH2	JAK2	KDR	KIT	KRAS	MAP2K1	MET	MLH1	MTOR	MYC	MYCN	NOTCH1
	NRAS	NTRK1	PDGFRA	PIK3CA	PTCHI	PTEN	PTPN11	RBI	RET	ROS1	SMAD4	SMO	SRC
	STK11	TP53											

* Genes in bold indicate fusion analysis

CancerScreen Panel 100

DESCRIPTION

CancerScreen Panel 100 is an NGS assay for the comprehensive analysis of around 100 genes associated with somatic cancer. All types of variants are detected with high sensitivity and specificity. The report consists of the primary, secondary, and tertiary results for the In-depth understanding and interpretation of sequencing data.

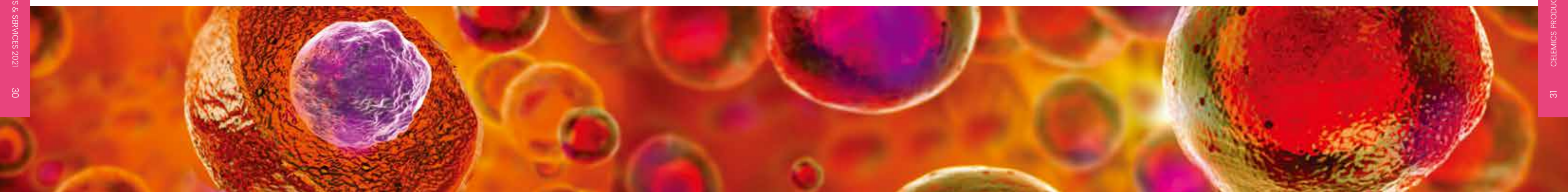
GENE LIST

CancerScreen Panel 100	ABL1	AKT1	AKT2	AKT3	ALK	APC	ARID1A	ARID1B	ARID2	ATM	ATRX	AURKA	AURKB
	BARD1	BCL2	BLM	BMPRIA	BRAF	BRCA1	BRCA2	BRIPI	CDHI	CDK4	CDK6	CDKN2A	CHEK2
	CSFIR	CTNNB1	DDR2	EGFR	EPCAM	EPHB4	ERBB2	ERBB3	ERBB4	EZH2	FBXW7	FGFR1	FGFR2
	FGFR3	FLT3	GNAI1	GNAQ	GNAS	HNF1A	HRAS	IDH1	IDH2	IGFIR	ITK	JAK1	JAK2
	JAK3	KDR	KIT	KRAS	MDM2	MET	MLH1	MPL	MRE11	MSH2	MSH6	MTOR	MUTYH
	NBN	NF1	NOTCH1	NPM1	NRAS	NTRK1	PALB2	PDGFRA	PDGFRB	PIK3CA	PIK3R1	PMS2	PRSS1
	PTCHI	PTCH2	PTEN	PTPN11	RAD50	RAD51C	RAD51D	RBI	RET	ROS1	SLX4	SMAD4	SMARCB1
	SMO	SRC	STK11	SYK	TERT	TOPI	TP53	VHL					

CancerScreen Panel 400

DESCRIPTION

CancerScreen Panel Core is an NGS assay designed to detect all types of variants in over 400 genes associated with somatic cancer. Targeting the selected genes with high sensitivity and specificity enables saving cost and effort. The report consists of the primary, secondary, and tertiary results for the In-depth understanding and interpretation of sequencing data.



CancerScreen Panel

400

GENE LIST

ABL1	ABL2	ADGRA2	AKT1	AKT2	AKT3	ALK	AMER1	APC	APCDD1	APEX1	APOB	APOBEC1
AR	ARAF	ARFRP1	ARID1A	ARID1B	ARID2	ASXL1	ATM	ATPI1B	ATR	ATRX	AURKA	AURKB
AXINI	AXL	B2M	B3GAT1	BACH1	BAP1	BARD1	BCL2	BCL6	BCL9	BCOR	BCR	BIRC2
BIRC3	BLM	BRAF	BRCA1	BRCA2	BRD2	BRD3	BRD4	BRIPI	BTG1	BTK	BLA	CARD11
CASP5	CASP8	CBFB	CBL	CDK12	CDK4	CDK6	CDK8	CDKN1A	CDKN1B	CDKN2A	CDKN2B	CDKN2C
CDX2	CEBPA	CHD1	CHD2	CHD4	CHEK1	CHEK2	CHUK	CIC	CRBN	CREBBP	CRKL	CRLF2
CSF1R	CSF2	CSF2RA	CSF2RB	CSNK2A1	CTCF	CTLA4	CTNNA1	CTNNB1	CUL3	CUL4A	CUL4B	CXCL10
CXCL11	CXCL9	CXCR3	CYLD	CYP17A1	DAXX	DCUN1D1	DDR2	DICER1	DIS3	DNMT1	DNMT3A	DOCK2
DOT1L	EGFR	ELMO1	EML4	EMSY	EP300	EPHA3	EPHA5	EPHA6	EPHA7	EPHB1	EPHB4	EPHB6
ERBB2	ERBB3	ERBB4	ERCC1	ERCC2	ERG	ERRF1	ESR1	ETV1	ETV4	ETV5	ETV6	EWSR1
EYA2	EZH2	FANCA	FANCC	FANCD2	FANCE	FANCF	FANCG	FANCI	FANCL	FANCM	FAS	FAT1
FAT3	FBXW7	FGF1	FGF10	FGF12	FGF14	FGF19	FGF2	FGF23	FGF3	FGF4	FGF6	FGF7
FGFR1	FGFR2	FGFR3	FGFR4	FH	FLCN	FLT1	FLT3	FLT4	FOXA1	FOXL2	FOXO3	FOXP3
FRS2	FUBP1	GABRA6	GAS6	GATA1	GATA2	GATA3	GATA4	GATA6	GID4	GLI1	GNAI1	GNAI3
GNAQ	GNAS	GRIN2A	GRM3	GSK3B	GUCY1A2	GZMA	GZMB	GZMH	H3F3A	HGF	HIST1H3B	HNF1A
HOXA3	HRAS	HSD3B1	HSP90AA1	IDH1	IDH2	IDO1	IDO2	IFITM1	IFITM3	IFNA1	IFNB1	IFNG
IGF1	IGF1R	IGF2	IGF2R	IKBKE	IKZF1	IL12A	IL12B	IL2	IL23A	IL6	IL7R	INHBA
INPP4B	INSR	IRF2	IRF4	IRS2	ITGAE	ITK	JAK1	JAK2	JAK3	JUN	KAT6A	KDM5A
KDM5C	KDM6A	KDR	KEAP1	KEL	KIT	KLF4	KLHL6	KMT2A	KMT2B	KMT2C	KNSTRN	KRAS
LAG3	LMO1	LRP1B	LRP6	LTK	LYN	LZTR1	MAGI2	MAGOH	MAML1	MAP2K1	MAP2K2	MAP2K4
MAP3K1	MAP3K13	MAPK1	MAX	MCL1	MDM2	MDM4	MED12	MEF2B	MEN1	MET	MITF	MLH1
MPL	MRE11	MSH2	MSH6	MTOR	MUTYH	MYB	MYC	MYCL	MYCN	MYD88	MYO18A	NCOA3
NCOR1	NF1	NF2	NFE2L2	NFKB1A	NOTCH1	NOTCH2	NOTCH3	NOTCH4	NPM1	NRAS	NSD1	NSD3
NTRK1	NTRK2	NTRK3	NUP93	NUTM1	PAK3	PAK5	PALB2	PARP1	PARP2	PARP3	PARP4	PAX5
PBRM1	PDCD1	PDCD1LG2	PDGFRA	PDGFRB	PDK1	PGR	PHF6	PHLPP2	PIK3C2B	PIK3C3	PIK3CA	PIK3CB
PIK3CG	PIK3R2	PKHD1	PLCG1	PLCG2	PMS2	PNP	PNRC1	POLD1	POLE	PPARG	PPP2R1A	PRDM1
PREX2	PRF1	PRKARIA	PRKCI	PRKDC	PRPF40B	PRSS8	PTCH1	PTCH2	PTEN	PTK2	PTPN11	PTPRC
PTPRD	QKI	RAB35	RAC1	RAC2	RAD17	RAD50	RAD51	RAD52	RAD54L	RAF1	RANBP2	RARA
RBI	RBM10	REL	RET	RHEB	RHOA	RHOB	RICTOR	ROBO1	ROBO2	ROS1	RPA1	RPS6KB1
RPTOR	RUNX1	RUNX1T1	RUNX3	SDHA	SDHB	SDHC	SDHD	SEMA3A	SEMA3E	SET	SETBP1	SETD2
SF3A1	SF3B1	SH2B3	SKP2	SUT2	SMAD2	SMAD3	SMAD4	SRSF2	SRSF7	STAG2	STAT3	STAT4
TERT	TET2	CD274	TP53									

CancerScreen Panel
400

