



# Bencos CancerScreen Comprehensive 750 (BCC750)

Highly accurate and comprehensive NGS panel for somatic cancer

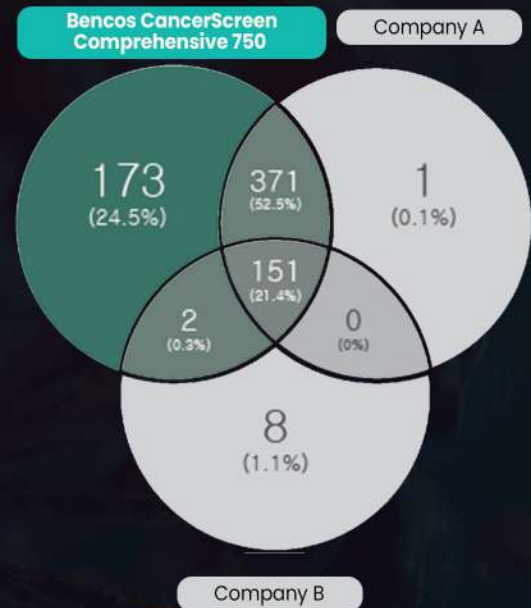
## Key Features

- Comprehensive analysis of most common genes related to solid tumors in a single NGS run.
- Sensitive detection with only 10 ng of gDNA.
- NGS panel applicable for companion diagnostics and drug therapy.
- Cost-effective methodology leading to excellent result quality.
- Superior capture performance even in hard-to-capture region, such as GC/AT-rich and homologous regions.
- Flexible integration on various sequencer, including Illumina, Ion Torrent, and MGI.

# Bencos CancerScreen Comprehensive 750 (BCC750)

The Bencos CancerScreen Comprehensive 750 (BCC750) panel is designed to detect all variant types and the immuno-oncology markers, microsatellite instability (MSI), and other possible relevant variants, which are crucial biomarkers for cancer immunotherapy. The panel consists of > 690 genes for DNA and >60 genes for RNA associated with cancer. With Bencos Healthcare' exclusive probe design and assay optimization technologies, the panel ensures superior performance in terms of detection sensitivity and specificity, enabling time-saving and cost-effective NGS in various oncology-related applications. Along with the panels and reagents, Bencos Healthcare also offers client-specific full bioinformatics support, along with the report which consists of primary, secondary, and tertiary analysis for in-depth understanding and interpretation of sequencing data.

## PANEL COMPARISON



## PRODUCT SPECIFICATION

Bencos CancerScreen Comprehensive 750 (BCC750)	
Gene Numbers	> 700 genes (> 690 genes for DNA, > 60 genes for RNA)
Target Regions	CDS, Hotspot variant, UTR, Intronic, Intergenic regions, and MSI markers
Variant Types	SNV, Indel, CNV, Fusion, MSI, TMB
Target Size	> 2 Mb (DNA) & 200 Kb (RNA)
Sample Types	Blood and Tissue (FFPE, Frozen Tissue)
Min. Input Amount of DNA	> 10 ng
NGS Platform	All Illumina, Thermo Fisher, MGI Platforms

# Performance Data

## Bencos CancerScreen Comprehensive 750-DNA

	On target read ratio	Uniformity (St. Dev)
Single-plex Sample	84.72%	0.56
8-plex Sample	84.53%	0.57

**Table 1. Bencos CancerScreen Comprehensive 750-DNA performance statistics.**

DNA panel demonstrated on-target ratio of 84.72 and 84.53% for single-plex and 8-plex sample, respectively, showing reproducible results regardless of single-plex and 8-plex sample library with robust uniformity. The data was generated using OncoSpan FFPE (Horizon Discovery) sample for **Table 1** and **Figure 1**.



**Figure 1. Expected VAF vs. Detected VAF correlation comparison.**

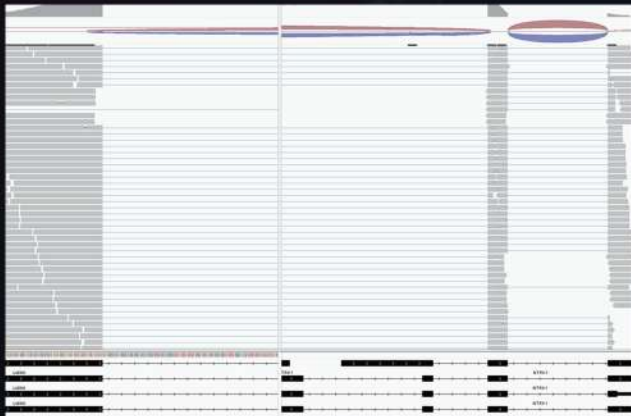
Each sample is consists of 8-plex sample libraries. The actual VAF showed relative concordance for the corresponding target genes, demonstrating the detection capability and reproducibility of the panel, regardless of the single or pooled sample libraries.

	Expected AF % (at COA)	Actual AF %		Expected AF % (at COA)	Actual AF %
NRAS p.Q61K	12.11	14.39	EGFR p.L858R	3.80	4.34
ALK 3'UTR insertion	9.23	9.44	MET p.L238fs*25	5.82	7.03
PIK3CA p.H1047R	17.36	19.63	BRAF p.V600E	12.45	12.38
EGFR p.E746_A750 (15bp del)	1.66	1.56	KRAS p.G12D	5.73	7.09
EGFR p.T790M	1.02	1.09	TP53 p.P72R	90.92	91.41

**Table 2. Comparison of Expected and Detected VAF values.**

The provided table illustrates few of selected variants which were assessed to have relatively similar allele frequencies.

# Bencos CancerScreen Comprehensive 750 (BCC750)-RNA



**Figure 2. Fusion breakpoint IGV.**

Generated with STAR-Fusion for renown rearrangement LMNA & NTRK1 pair. The IGV plot illustrates the successful capture and data generation of Bencos CancerScreen Comprehensive 750 from one of the rearrangements included in Seraseq® FFPE Fusion RNA Reference Material v4.

Gene 1	Gene 2	Gene 1	Gene 2
CCDC6	RET	LMNA	NTRK1
CD74	ROS1	NCOA4	RET
EGFR	SEPTIN14	PAX8	PPARG
EML4	ALK	SLC34A2	ROS1
ETV6	NTRK3	SLC45A3	BRAF
FGFR3	BAIAP2L1	TFG	NTRK1
FGFR3	TACC3	TMPRSS2	ERG
KIF5B	RET	TPM3	NTRK1
EGFR exon 2-7 skipping		MET exon 14 skipping	

**Table 3. List of fusion for RNA panel.**

Bencos CancerScreen Comprehensive 750 RNA panel can detect above listed fusion points, included in Seraseq® FFPE Fusion RNA Reference Material v4, for assessing RNA variants associated with somatic cancer.

## Bencos Healthcare Solutions Pvt. Ltd.

📍 Techno Polis, Salt Lake, Bp Block, Sector V, Bidhannagar, Kolkata, West Bengal, 700091

☎ +91 980 405 3103/ +91 987 545 1675

✉ sales@bencoslif.com