

OncoStrands™

Essential Panel (Tissue Biopsy)

OncoStrands™ Essential Panel (Tissue) utilizes next generation sequencing (NGS) to identify somatic mutations within 50 targeted genes associated with different tumour types. This multi-biomarker panel enables detection of some of the most common actionable targets seen in many cancer types including those in lung, colon, skin, urinary bladder, stomach, thyroid and others.

The assay simultaneously screens for different types of mutations including single nucleotide variations (SNVs), copy number variations (CNVs) and fusions in multiple genes, while utilizing an extremely small amount of formalin-fixed, paraffin embedded (FFPE) tissue or cytology tumour material (cell block or smears with an adequate number of tumour cells).

This enables oncologists to select the most appropriate therapeutic approach, anticipate prognosis of the disease course, and fully personalize the disease management for each patient.



50 Gene Targets
SNVs, CNVs, fusions



Minimum 10% Tumour Content Required



High Accuracy at ≥5% Limit of Detection



5 Days Turnaround Time*



Bespoke Consultation with Molecular Pathologists

*Comprehensive report available 5 working days from laboratory sample receipt and subject to sample acceptance criteria

DNA Hotspots (45)

AKT1, FGFR1, MET,
AKT2, FGFR2, MTOR,
AKT3, FGFR3, NRAS,
ALK, AR, FGFR4, NTRK1,
ARAF, FLT3, NTRK2,
BRAF, GNA11, NTRK3,
CDK4, GNAQ, PDGFRA,
CDKN2A, GNAS, PIK3CA,
CHEK2, HRAS, PTEN,
CTNNB1, IDH1, RAF1,
EGFR, IDH2, RET,
ERBB2, KIT, ROS1,
ERBB3, KRAS, SMO,
ERBB4, MAP2K1, TP53
ESR1, MAP2K2.

CNVs (14)

ALK,
AR,
CD274,
CDKN2A,
EGFR,
ERBB2,
ERBB3,
FGFR1,
FGFR2,
FGFR3,
KRAS,
MET,
PIK3CA,
PTEN

Fusions (18)

ALK, ROS1,
AR, RSPO2,
BRAF, RSPO3
EGFR,
ESR1,
FGFR1,
FGFR2,
FGFR3,
MET,
NRG1,
NTRK1,
NTRK2,
NTRK3,
NUTM1,
RET.

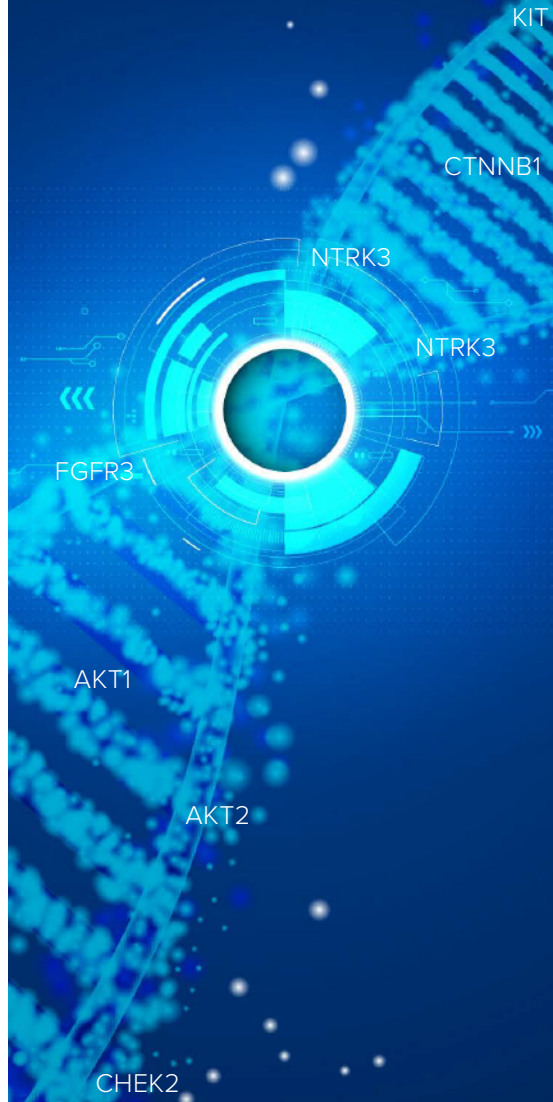
Test Specifications & Validation Characteristics

Based on in-house validation of clinical samples and reference standards








Methodology	Next generation sequencing			
Aberrations Covered	SNV, CNV, Fusion			
Specimen Requirements	<ul style="list-style-type: none"> • FFPE tissue block or 8 unstained sections (each 5µm thick). Minimum tumour content of 10%. • Copy of histology report. 			
Mutation Type	Accuracy	Sensitivity	Specificity	Limit of Detection
SNVs/short deletions	100%	100%	100%	≥5%
CNVs*	100%	97.8%	100%	N/A
Fusions**	100%	98.6%	100%	N/A

*CNVs on NGS platforms is an estimate based on prediction algorithm which considers multiple factors. The gene amplification of ≥5 is considered a true prediction on this platform.

**High confidence fusion calls considered true positive calls are based on ≥10 copies.



Key Therapeutic, Diagnostic and Prognostic Biomarkers (DNA & RNA Variants) Screened for Multiple Cancer Types

 Lung	 Colon	 Melanoma	 Stomach /GIST	 Thyroid	 Head & Neck	 Brain
SNVs/del ALK BRAF EGFR ERBB2 KRAS MET PIK3CA CNVs ERBB2 MET Fusions ALK MET NTRK1 NTRK2 NTRK3 RET ROS1 Other genes of interest AKT1 CDK4 FGFR1 FGFR3 MAP2K1 NRAS TP53	SNVs BRAF HRAS KRAS NRAS PIK3CA CNVs ERBB2 MET Fusions FGFR1 NTRK1 NTRK2 NTRK3 Other genes of interest AKT1 CTNNB1 ESR1	SNVs BRAF KIT NRAS Other genes of interest CDK4 CTNNB1 GNA11 GNAQ IDH1 KRAS MAP2K1 PDGFRA PIK3CA TP53	SNVs/del BRAF KIT KRAS NRAS PDGFRA PIK3CA CNVs AR EGFR ERBB2 MET Fusions FGFR1 FGFR2 NTRK1 NTRK2 NTRK3 Other genes of interest AKT1 CDK4	SNVs BRAF CTNNB1 HRAS KRAS NRAS Fusions NTRK1 NTRK2 NTRK3 RET	SNVs HRAS KRAS NRAS PIK3CA CNVs EGFR ERBB2 MET Fusions FGFR1 FGFR3 NTRK1 NTRK2 NTRK3	SNVs BRAF CDKN2A IDH1 IDH2 CNVs EGFR MET Fusions BRAF NTRK1 NTRK2 NTRK3 Other genes of interest CDK4 KIT PDGFRA TP53

Reports Include

- Contents as per the latest AMP and CAP guidelines
- Recommended clinical matching with biomarkers, and clinical trials as per FDA, EMA, NCCN, ESMO, etc.

Services Include

- Quality control for tissue adequacy performed by staff pathologist
- Tests are run in house by qualified scientific and clinical staff under an accredited environment
- Complimentary consultation on various aspects of testing (e.g., appropriate test options based on tumour type, tissue availability etc) provided by qualified staff molecular pathologist



Additional Services

- IHC- MMR, PDL-1, ALK, ROS1
- Range of Oncostrands™ (oncosomatic) and hereditary panels

About Us

At LifeStrands Genomics laboratories we believe that everyone should have access to better healthcare through the advancement of clinical genomics. Within our accredited laboratories, our dedicated team of medical professionals and scientists work together to deliver high-quality and reliable genomic solutions to clinicians, patients & researchers.



LifeStrands Genomics Laboratory Locations

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