ALMAC

Partnering to Advance Human Health

Almac Diagnostic Services

Research Use Only

Illumina TruSeq™ RNA Exome Panel

A high quality Next Generation Sequencing (NGS) solution built on Illumina TruSeq™ RNA Exome chemistry, with Almac optimised workflow, that detects comprehensive RNA gene expression from solid tissue types. The platform covers approximately 99% of the RefSeq Exome with easily interpretable raw sequencing data for use in biomarker discovery and translational research.

Platform	
Intended use	For biomarker discovery and retrospective validation studies
Quality & regulatory	Research Use Only (RUO)
Technology	NGS Technology – Illumina NextSeq 500, Illumina NextSeq 550 and Illumina NovaSeq 6000
Type	Central laboratory based offering for mRNA analysis
Disease indication	
Disease indication	Multiple disease indications
Gene targets	Targets >21,000 genes (~99% RefSeq Exome)
Sample requirements	
Tissue type	Optimised for Formalin Fixed Paraffin Embedded (FFPE) Tissue Can also be utilised with other tissue types including fresh frozen (FF)
Recommended tissue requirements	10 x 5µm FFPE sections with a tissue area >1cm2 and high tumour content >10% viable cells
Input material	RNA
Recommended input requirements	100- 500 ng (dependent on sample quality defined by DV200 and Almac proprietary qPCR assay- RNA-Seq-ability™)
Quality Control (QC)	
QC Assessment	Established process controls included within each processing batch. Comprehensive QC assessment of data including: • *Sample & Library QC:* RNA input, nucleic acid quality and library concentration • *Sequencing Run QC:* cluster density, clusters passing filter, error rate and % bases ≥Q30 • *Post Sequencing & Alignment QC:* % reads aligned, % GC content, % rRNA reads, % duplicates and median coverage across housekeeping genes.
Turnaround time	
TAT	For retrospective studies the turnaround time (TAT) is agreed on a per project basis
Reporting	
Raw data provided	Yes – FASTQ and BAM files provided in addition to read count data matrices in Fragments Per Kilobase of transcript per Million mapped reads (FPKM)
Customisable reporting	Yes
Bioinformatics applications	Optimised RNAseq pipelines delivered via cloud-based server DNAnexus* (*Other applications will be discussed on a per project basis dependent on client requirements)
Added value	
Added value to client	In conjunction with our RNA-Seq service, Almac also offer clara^{T}- A unique software driven solution classifying biologically relevant gene expression signatures into a comprehensive, easy-to-interpret report. A cost effective solution, helping you to maximise the understanding of your data set, whilst saving valuable research time.

Key benefits:

Almac Diagnostic Services experience

- Proven ability to discover, develop and validate high quality, innovate RNA-based biomarkers.
- An extensive track record in validating assays across key regulatory standards including CLIA, CLEP, CE-IVD and FDA.

Almac Diagnostic Services RNA panel workflow optimisation

- Optimised protocol maximising on pass rates and sequencing data quality from challenging sample types such as core needle biopsies, reducing sample attrition.
- High quality service with robust quality control and data assurance
- Provision of extensive raw data for research use
- Requires minimal sample material
- Evaluation of multiple outputs and biologies on one panel for discovery and translational research
- Results in highly repeatable and reproducible gene expression data in comparison to other RNA expression platforms
- Almac customised bioinformatics pipeline for reporting and data transfer via a powerful, user friendly, cloud-based solution (DNAnexus)

For Research Use Only.
Not for use in diagnostic procedures.

Find out more:

Visit our website almacgroup.com/diagnostics