



Streamlining NGS Data Management & Analysis

Reads to Discovery

ChIP-Seq Analysis

RNA-Seq

DNA-Seq

ChIP-Seq

Small
RNA-Seq

Methyl-Seq

MeDIP-Seq

www.strand-ngs.com

Analyze | Visualize | Annotate | Discover

strand 
New Generation Healthcare

Alignment with Strand NGS aligner

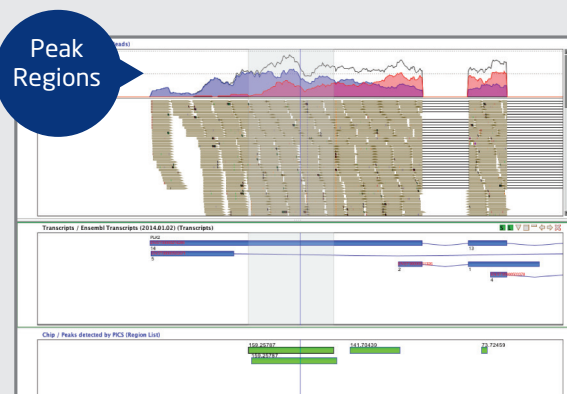
- Handles variable length reads and paired reads as well.
- Allows arbitrary number of gaps and mismatches.
- Options for trimming adaptors, low quality bases, and screening reads against standard screening databases.

Alignment Statistics			
	HI	DR90	
Total number of reads	31,236,617 (100%)	34,961,943 (100%)	
Aligned reads	42,586,823 (82.5%)	27,325,488 (80.1%)	
- Uniquely matched reads	37,713,480 (73.6%)	25,300,273 (72.6%)	
- Multiply matched reads	4,855,243 (8.9%)	2,025,215 (7.5%)	
Unaligned reads	8,971,794 (17.5%)	6,935,455 (19.9%)	
- No matches found	8,971,794 (17.5%)	6,935,455 (19.9%)	
- Too many matches	NA	NA	
Reads ignored due to failure of vendor QC	0 (0%)	0 (0%)	
Reads ignored due to small size	0 (0%)	0 (0%)	
Total reads screened	NA	NA	
Maximum read length	87	87	
Average read length	81	78	
Alignment Status			
	HI	DR90	
Aligned to transcriptome only	21,325,609	14,846,624	
- Involving known splices only	21,297,019	14,830,399	
- Involving novel splices	28,590	16,225	
Aligned to genome	20,941,214	13,979,864	
- Involving transcriptome exons	16,975	5,075	
- Without transcriptome exons	20,924,239	13,974,789	
Pairs aligning to same transcript	0	0	
Aligned Read Status			
Type	HI	DR90	
Single End	42,586,823	27,325,488	
Unaligned	8,971,794	6,935,455	
Unknown	0	0	
Read Distribution			
Chromosome	HI	DR90	
chr1	4,088,386	2,421,844	
chr2	5,504,766	5,882,585	
chr3	1,874,134	1,093,436	

Alignment Statistics

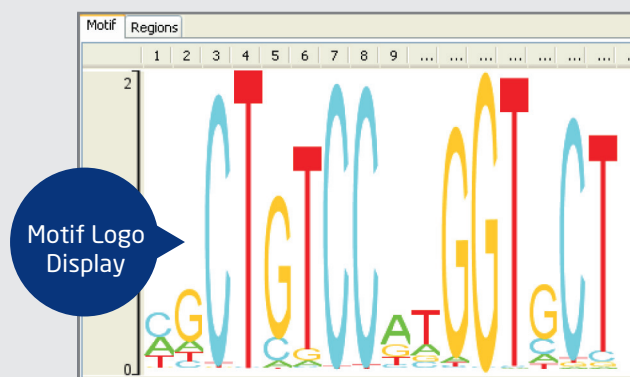
Peak Detection

- Detect enriched regions in ChIP sample as compared to the control.
- Detect peaks of transcription factor regulatory sites using PICS/MACS.
- Identify genes regulated by TF binding sites.
- Detect histone modification sites using the enriched region detection method.



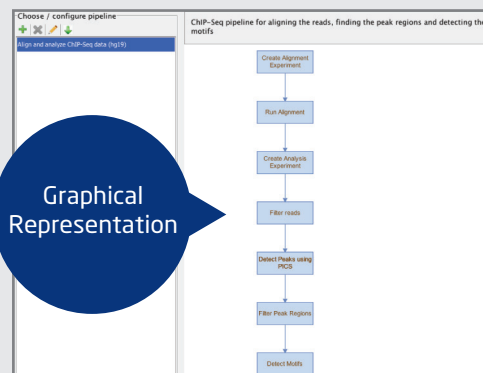
Motif Detection

- Identify motifs in detected peak regions using GADAM.
- Import peak regions to detect motifs.
- Import motifs in JASPAR format.
- Scan for motifs in the entire genome or in regions of interest.



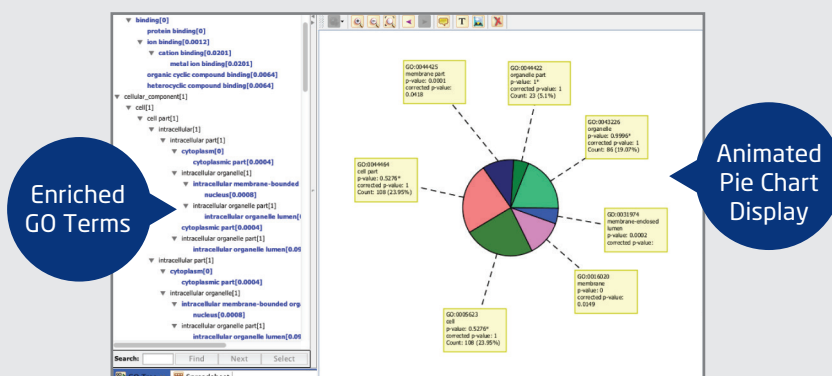
Pipeline Execution

- Pipelines that run in the background.
- Analysis pipeline that includes filters and peak detection.
- Additional pipelines that start from alignment of raw reads or direct import of aligned samples.
- Customization of pipelines for individual runs.



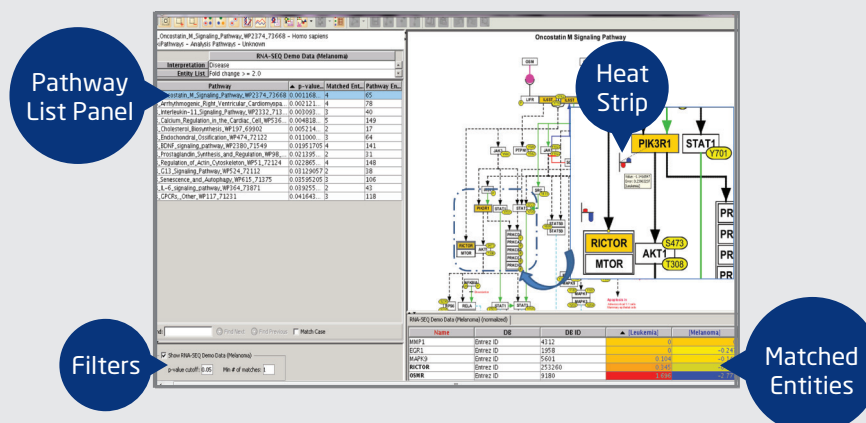
GO Enrichment

- Annotate regions with genic information to discover those affected by peak regions.
- GO Enrichment analysis to detect enriched Gene Ontology terms.



Pathway Analysis

- Single Experiment Analysis (SEA) identifies enriched pathways for the genes from a single experiment type.
- Multi-Omic Pathway Analysis (MOA) from multiple genomics and transcriptomics experiments.
- Overlay differentially expressed entities on curated pathways.
- Choose from curated pathways like WikiPathways, BioCyC pathways, BioPAX pathways or literature-derived networks like NLP and MeSH.
- Find significant pathways for differentially expressed genes.

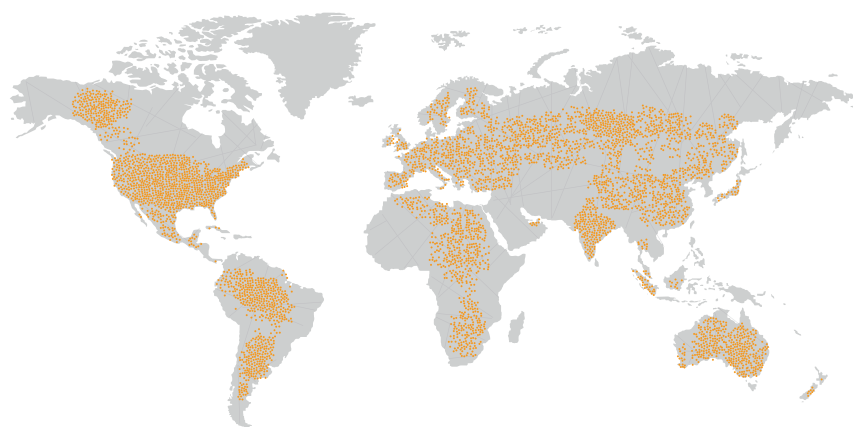


About Strand

A History of Innovative Genomic Research

Strand Life Sciences is a global genomic profiling company and leader in precision medicine diagnostics, aimed at empowering cancer care and genetic testing for inherited diseases. Strand works with physicians and hospitals to enable faster clinical decision support for accurate molecular diagnosis, prognosis, therapy recommendations, and clinical trials. The Strand Center for Genomics & Personalized Medicine is India's 1st and only CAP & NABL accredited NGS laboratory.

www.strandls.com



A Trusted Partner to Companies Worldwide

For 15 years, our genomics products and solutions have facilitated the work of leading researchers and medical geneticists in over 2,000 laboratories and 100 hospitals around the world.

Strand Life Sciences Pvt. Ltd

5th Floor, Kirloskar Business Park, Bellary Road, Hebbal, Bangalore 560024
Phone: +91-80-40 (787263) Fax: +91-80-4078-7299

Contact us

sales@strandngs.com

USA: 1-800-752-9122 ROW: +1-650-353-5060

support@strandngs.com

USA: 1-800-516-5181 ROW: +1-650-288-4559