

The Human Genome-Wide SpliceArray™

On the Affymetrix GeneChip® Platform



SpliceArray™ Products

Advancing healthcare through RNA splicing

SpliceArray™ products are a new generation of microarrays for complete transcriptome profiling from ExonHit, a commercial leader with greater than ten years of expertise in the field of alternative splicing. Our novel arrays help uncover the complex relationship between gene

expression and physiological function. This high-performance platform allows researchers to interrogate the genome at an exceptionally high resolution and elucidate the differences between isoforms that may indicate changes in phenotype.

Human SpliceArray™ probe database

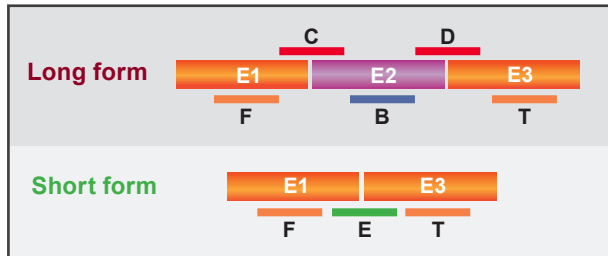
Number of Profiled Genes	20,649
cDNA evidenced events	138,636
Novel exon	46,352
Novel exons	9,413
Exon skipped	31,163
Exons skipped	11,905
Alternative splice donor	10,281
Alternative splice acceptor	12,606
Intron retention	5,999
Novel intron	10,917
Single exon skip predictions	142,697
Structural introns monitored	181,620

FEATURES

- 20,649 profiled genes
- 19,066 genes with evidence of known or potential alternative splicing
- ~7 alternative splicing events per gene (on average) as identified from public sequence data
- Public data compiled from Refseq, human mRNAs, and human EST sources
- Probe database generated using NCBI Build 35
- Novel content discovery enabled by additional 142,697 predicted exon skip events and 1,633,941 structural probes

PROBE CONTENT

SpliceArray™ products utilize the only patented configuration* of exon-body and junction probes, providing robust coverage of all transcripts and allowing specific detection of the two possible molecular species resulting from a splice event.

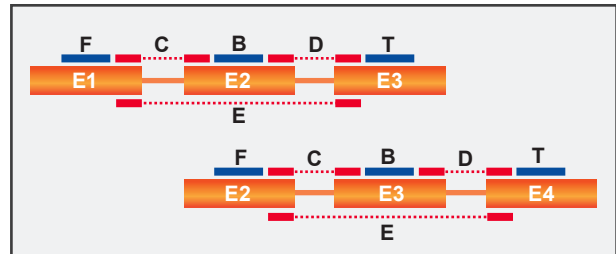


Evidenced Events – probes targeted to events that are represented by cDNA sequences

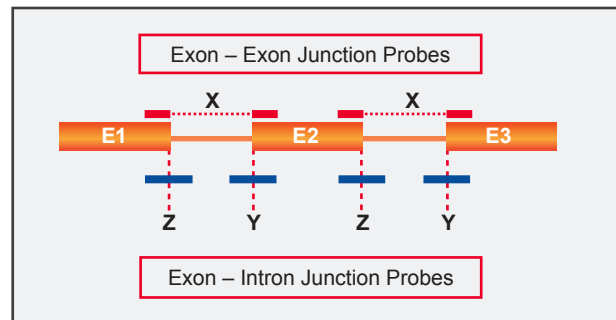
DISCOVERY PROBES

In addition to probes that monitor splice events evident in sequence databases, “discovery” probes are also included that cover the entire gene length. These discovery probes are specific for each exon, as well as junctions for exon/intron, intron/exon, and exon/exon (neighboring and next-to-neighboring) areas.

Such probes allow expression characterization of novel, unidentified splice variants, exon skip events, alternative splice donor and acceptor usage, and intron retention events. More detailed probe design information can be found at www.splicearray.com.



Discovery Probes—predicted exon skip probes



Discovery Probes—structural probes

PLATFORM SPECIFICATIONS

- 6,079,562 probes distributed randomly across array
- Up to 18 probes designed per splice event (3 for each of the B, C, D, E, F and T probe sets)
- Perfect match only with GC probe sets used for background subtraction
- Positive and negative control probes
- Manufactured on the Affymetrix 49-format GeneChip® with 5-micron feature size

- Probe orientation designed for use with the NuGEN WT-Ovation™ RNA Amplification Systems and FL-Ovation™ Biotin Module Products

ADDITIONAL PRODUCTS

Over 70 gene families and custom splice array designs on the Agilent Technologies platform

*Granted Patents: US 6,881,571; EP 1,062,364



ExonHit Therapeutics, Inc.
217 Perry Parkway, Building #5
Gaithersburg, MD 20877 USA
Toll free US and Canada 1-888-811-7070
International +1-240-404-0333
E-mail splicearray@exonhit.com
www.exonhit.com



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