

Target Gene Expression	
Service Title	Exon Assay
Workflow Code	AFFY_EX
Short Service Description	Both gene-level and exon-level expression profiling can be performed on the whole-genome scale using a single array. Detection of alternative splicing events. Human, rat and mouse arrays only.
Base Price (Price per unit)	Price on enquiry
Turn Around Time	5 working days
Detailed Description and background	
<p>This is a whole-transcript assay system featuring probes across the entire length of the transcript. This enables the examination of expression of individual exons and entire genes and alternative splicing events within the same experiment. The arrays include quality control probes to assess the sample amplification and successful hybridisation to the arrays. A positive control is included to monitor assay performance. Initial analysis is performed in Expression Console. CPGR will provide assistance with experimental design where required.</p>	
Service Details	
<p>The sample number for analysis is dependent on the nature of the experimental design. It is advisable to have at least 3 replicates however the actual optimum number depends on the samples to be investigated and variance inherent in the experimental system. RNA samples must be of good quality with 260/280 ratios of 1.8-2.1 and 260/230 ratios > 1.8 and non-degraded. The quality of all samples are routinely checked prior to analysis. Sample concentration should be at least 70ng/ul (at least 200ng is required for the assay). Following the QC steps, first and second strand cDNA synthesis will be carried. The double stranded cDNA will be transcribed to aRNA (amplified RNA), followed by another round of 1st strand synthesis to generate sense strand DNA. The single stranded DNA is fragmented and end labelled with biotin prior to hybridisation. Following hybridization, the arrays are washed and stained using the GeneChip Fluidics Station 450 and scanned using the GeneChip® Scanner 3000 7G. The initial analyses is carried out to determine the quality of the data using Expression Console. Bioinformatics support is available if required.</p>	
Service Deliverable	
<p>Following initial analyses using Affymetrix Expression console, the raw data files are sent to the client with a data QC report. If required, bioinformatics support can be provided.</p>	
Sample/Info Submission Info	
<p>One sample per array. At least 500 ng of good quality RNA(in RNase free water) required at a minimum concentration of 70ng/ul, 260/280 ratios 1.8-2.1 and 260/230 ratios >1.80. Samples should be submitted on dry ice with a sample submission form (this will be sent to the client in advance) providing all the sample details required. Samples run in batches of 24.</p>	
Pricing Details	Price on request
Key Words	Affymetrix Exon array, exons, alternative splicing events, Biomarker discovery, RNA
Sample Shipping Address	Institute of Infectious Disease and Molecular Medicine, UCT, Faculty of Health Sciences, Wernher and Beit Building, Level 2, Lab S2.09, Anzio Road, Observatory, Cape Town 7925, South Africa
Related services	Bioinformatics, qRT-PCR, pathway analysis, biomarker discovery