

Target Gene Expression	
Service Title	Whole Genome 3' assay
Workflow Code	Affy_3p
Short Service Description	Comprehensive analysis of genome-wide expression on a single array
Base Price (Price per unit)	Price on enquiry
Turn Around Time	5 working days per 24 samples
Detailed Description and Background	
<p>The 3' expression arrays allow for extensive applications of gene expression and have proved to be useful tools for a range of expression profiling requirements. These included insights into gene function, regulatory mechanisms, identification of biomarkers and the determination of tissue specific gene expression patterns - these are but a few of the applications. 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 50ng/ul (at least 100ng is required for the assay). Following the QC steps, first and second strand cDNA synthesis will be carried out. The double stranded cDNA will be transcribed to aRNA (amplified RNA), incorporating a biotin-conjugated nucleotide. The aRNA will be fragmented to generate shorter fragments to facilitate hybridisation of the targets to the 25-mer probes. 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. A detailed list of the array types can be found on the Affymetrix website (More)</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>1 sample per array. At least 300 -400 ng of good quality RNA(in RNase free water) required at a minimum concentration of 50ng/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. Run in batches of 24 samples</p>	
Pricing Details	Price on request
Key Words	Affymetrix GeneChip Arrays, gene expression, regulatory pathways, 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