Supplementary materials to Chen WV, Delrow J, Corrin PD, Frazier JP and Soriano P (2004).

Identification and validation of PDGF transcriptional targets by microarray-coupled gene-trap mutagenesis.

***Nature Genetics*, 36, 304-312**

***Pub Med* reference**

Abstract

We developed a versatile, high-throughput genetic screening strategy by coupling gene mutagenesis and expression profiling technologies. Using a retroviral gene-trap vector optimized for efficient mutagenesis and cloning, we randomly disrupted genes in mouse embryonic stem (ES) cells and amplified them to construct a cDNA microarray. With this gene-trap array, we show that transcriptional target genes of platelet-derived growth factor (PDGF) can be efficiently and reliably identified in physiologically relevant cells and are immediately accessible to genetic studies to determine their *in vivo* roles and relative contributions to PDGF-regulated developmental processes. The same platform can be used to search for genes of specific biological relevance in a broad array of experimental settings, providing a fast track from gene identification to functional validation.

This web page provides the complete microarray data sets as well as the oligo sequences used in the publication.

A. Testis versus brain expression profiling (Figure 4)

MIAME checklist:	MIAME-TB.pdf
Gene expression data table:	GTA-TB.xls
Image analysis output files:	GTA-TB1.gpr GTA-TB2.gpr

B. PDGF transcriptional response profiling (Figure 5)

MIAME checklist:	MIAME-PDGF.pdf					
Gene expression data table:	GTA-PDGF.xls					
Image analysis output files:	GTA-P1.gpr	GTA-P2.gpr	GTA-P3.gpr	GTA-P4.gpr	GTA-P5.gpr	GTA-P6.gpr
	GTA-P7.gpr	GTA-P8.gpr	GTA-P9.gpr	GTA-P10.gpr	GTA-P11.gpr	GTA-P12.gpr
	GTA-P13.gpr	GTA-P14.gpr	GTA-P15.gpr	GTA-P16.gpr	GTA-P17.gpr	GTA-P18.gpr

C. Oligo sequences

3’ RACE:

Anchoring oligo (QT)	CCAGTGAGCAGAGTGACGAGGACTCGAGCTCAAGC(T)17
Anchoring primer 1 (QA)	CCAGTGAGCAGAGTGACGAGGAC
Anchoring primer 2 (QB)	GACGAGGACTCGAGCTCAAGC
Hygromycin-specific primer (HYGF)	ACTCGTCCGAGGGCAAAGGAATAGG
SD exon-specific primer (SDEXF)	GCTAGCGCGTTCGTCCTCACTCT
SD intron-specific oligo (SDINF)	GTGAGTACTCCCTCTCAAAAGCGGGCATGACTTC

5’ genomic anchoring PCR:

Adapter oligo 1(PDA-L)	AGCAGCGAACTCAGTACAACAACTCTCCGACCTCTCACCGAGT
Adapter oligo 2 (PDA-S)	ACTCGGTGA
Distal adapter	AGCAGCGAACTCAGTACAACA

primer (DAP)	
SA-specific primer (SASP)	GAAAGACCGCGAAGAGTTTG
U5-specific primer (U5SP)	CTGTTCCTTGGGAGGGTCTC

ROSA71 genotyping:

Forward gene-specific primer (R71F)	GCCTTTCTACCCACACAACTACA
Reverse gene-specific primer (R71R)	CTGGAAAACCGTTGTTTTGACTG
Beta-gal-specific primer (BGALR)	CGGGCCTCTTCGCTATTACGC

Strap RT-PCR:

Forward primer (5’ of insertion site)	ATCACGCCTTACGGCTACTTT
Reverse primer (3’ of insertion site)	GTGTGAAATCCACAGTCTTGACA

For further information, contact genetrap@fhcrc.org.