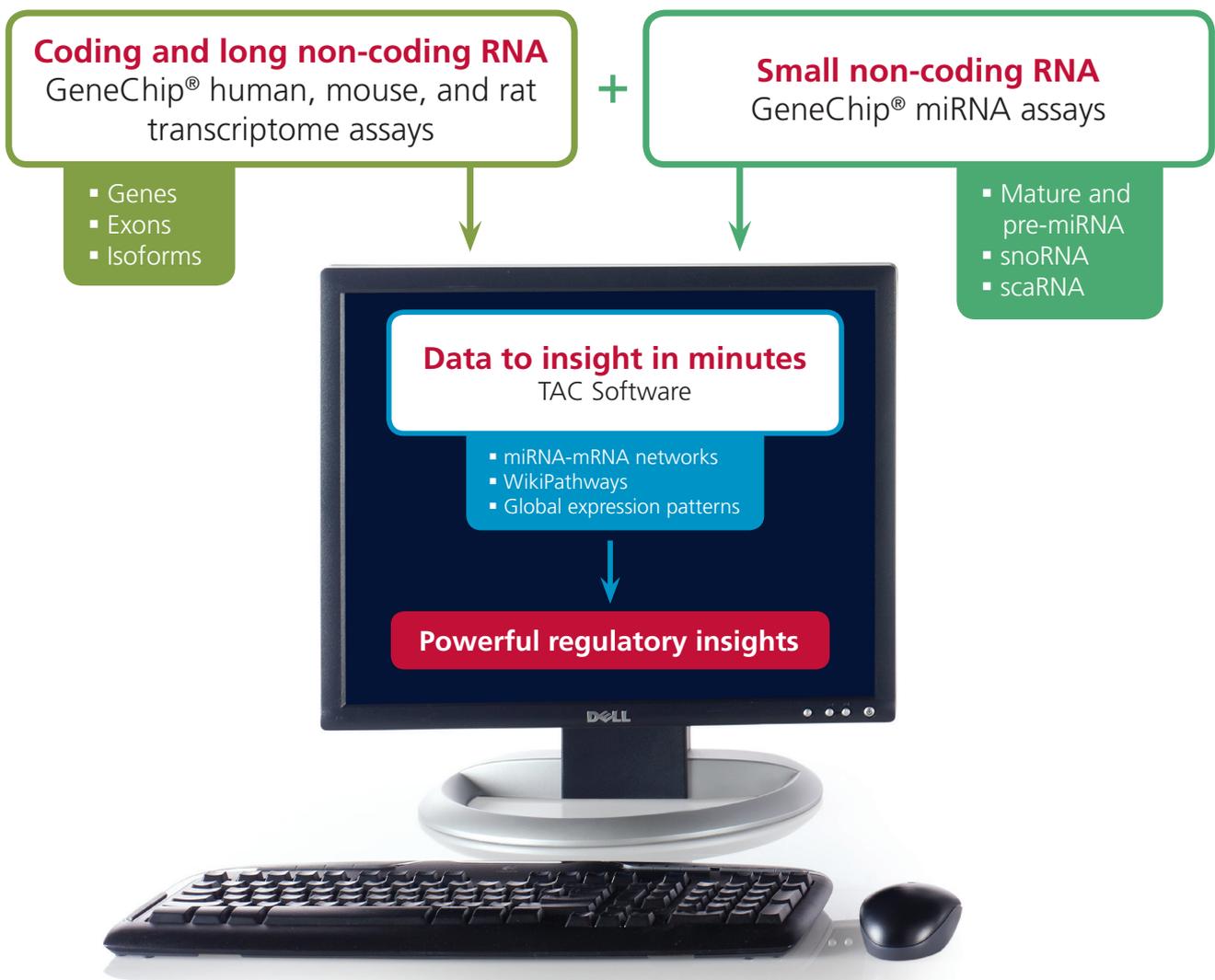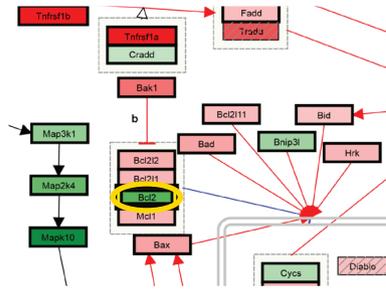# Is there an easier way to explore regulatory relationships?

Growing evidence suggests that both miRNA and long non-coding RNA are involved in gene regulation, playing important roles in the development and pathophysiology of disease. Without studying gene expression and regulation together, scientists risk missing critical information required to make powerful biological conclusions. However, these many-to-many relationships are complex, and deciphering the associations can be time-consuming and difficult.
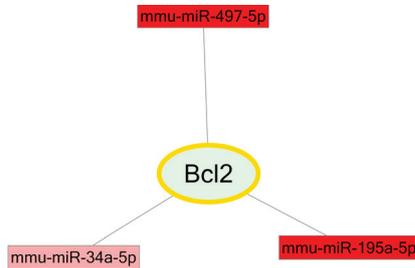
Combine coding and long non-coding expression data with miRNA expression data in Transcriptome Analysis Console (TAC) Software to easily and rapidly explore complex interactions involved in gene regulation.
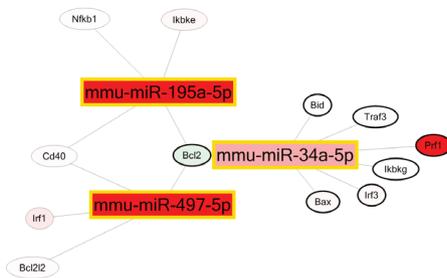
Coding and long non-coding RNA
GeneChip® human, mouse, and rat transcriptome assays

- Genes
- Exons
- Isoforms

+

Small non-coding RNA
GeneChip® miRNA assays

- Mature and pre-miRNA
- snoRNA
- scaRNA

Data to insight in minutes
TAC Software

- miRNA-mRNA networks
- WikiPathways
- Global expression patterns

Powerful regulatory insights

TAC 3.0 Software provides views of WikiPathway integration and miRNA-mRNA interaction networks.

Visualize pathways that have changed. Bcl2 (yellow circle), a known apoptosis-related gene, is shown in a partial view of the apoptosis pathway using WikiPathways integration view. The colors indicate the direction and magnitude of fold change (red: up regulated; green: down regulated).

Identify miRNAs interacting with your gene of interest. Select your gene of interest and visualize miRNA interactions. Three miRNAs are shown here targeting Bcl2 using the miRNA-mRNA interaction network view. All three miRNAs are shown to be up regulated, while Bcl2 shows decreased expression.

Explore complex networks of miRNA-mRNA relationships. Select miRNAs that interact with your gene of interest and expand the network to include common genes as well as those unique to the miRNAs. Eleven additional genes interact with the three miRNAs that also target Bcl2.

Ordering information

Part number	Description
Whole-transcriptome expression	
902661	GeneChip® Human Transcriptome Pico Assay 2.0, 12 samples
902662	GeneChip® Human Transcriptome Pico Assay 2.0, 30 samples
902663	GeneChip® Mouse Transcriptome Pico Assay 1.0, 12 samples
902664	GeneChip® Mouse Transcriptome Pico Assay 1.0, 30 samples
902665	GeneChip® Rat Transcriptome Pico Assay 1.0, 12 samples
902666	GeneChip® Rat Transcriptome Pico Assay 1.0, 30 samples
Gene regulation	
902445	GeneChip® miRNA 4.0 Array and Flashtag™ Bundle, 10 samples
902446	GeneChip® miRNA 4.0 Array and Flashtag™ Bundle, 30 samples
Analysis and visualization	
Free Download	Transcriptome Analysis Console (TAC) 3.0 Software