

***In Vivo* High Throughput Selection of Effective RNAi Probes (MITTAL01)**

Summary

Invention Field

RNA interference (RNAi) is a process of gene silencing mediated by double stranded RNA. RNAi is powerful tool that is revolutionizing study of gene function by allowing experimenters to control silencing of targeted genes. RNAi methods have broad implications ranging from basic research to therapeutic uses.

Current Limitations

A significant limitation for RNAi research and development is validating the silencing efficacy of small interfering RNA (siRNA) probes. Only about 20% of probes confer effective silencing. Validation typically requires laborious and inefficient techniques such as RT-PCR and Western blots to confirm silencing. Rapid and successful quantification of the degree of silencing that a specific siRNA probe confers on a

target gene is likely to have significant implications for both basic research and RNAi based therapeutics.

Advantages

This invention is a research tool for target validation that provides a rapid, reliable and cost effective quantification to screen for the most effective RNAi probes to a target gene.

Patent Status

A US patent is pending for this technology.

Figure Right:

A} Shows is a schematic showing manufacture and analysis of an RNAi microarray.

B} RNAi Microarray showing that an effective Green Fluorescent Protein (EGFP) specific short interfering RNA (siRNA) results in suppression of EGFP but not Red fluorescent Protein (RFP). Non -specific siRNA did not affect EGFP or RFP expression.

