



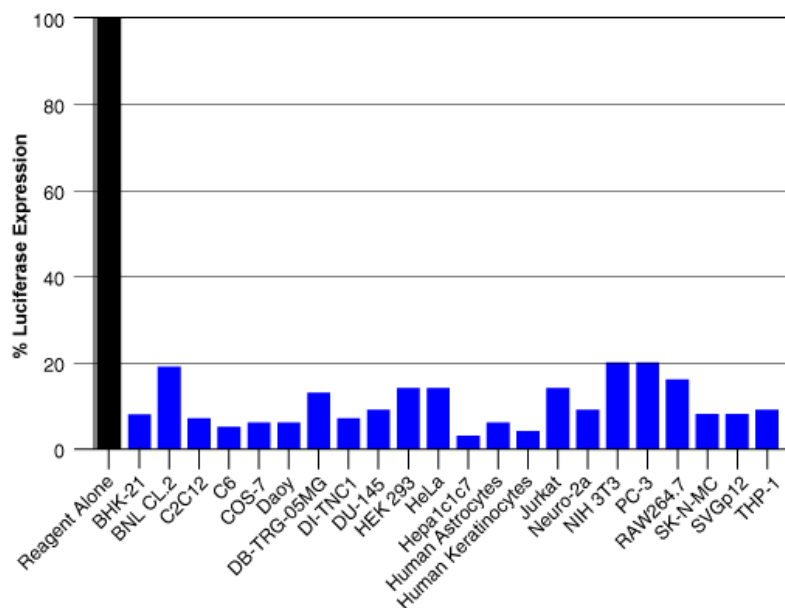
## **TransIT-TKO® Transfection Reagent**

**A high efficiency, low toxicity, siRNA transfection reagent for mammalian cells**

- **Broad Spectrum siRNA Delivery**—Utilize one transfection reagent and protocol for a wide variety of cells.
- **Low Cellular Toxicity**—Maintain cell density and reduce experimental biases.
- **Reproducible Results**—Obtain consistent, targeted gene knockdowns from day to day.
- **High Knockdown Efficiency**—Achieve optimal gene silencing in a large percentage of cells to ensure experimental success.

### **Cell Types Successfully Transfected by Mirus Bio:**

A549, BHK-21, BNL.CL2, C2C12, C6, CHO-K1, COS-7, Daoy, DB-TRG-05MG, D1-TNC1, DU145, HEK 293, HeLa, Hepa1c1c7, HepG2, human astrocytes, Jurkat, Keratinocytes (NIKS), MCF-7, Neuro-2a, NIH 3T3, PC-3, primary mouse hepatocytes, RAW 264.7, SK-N-MC, THP-1, Vero.

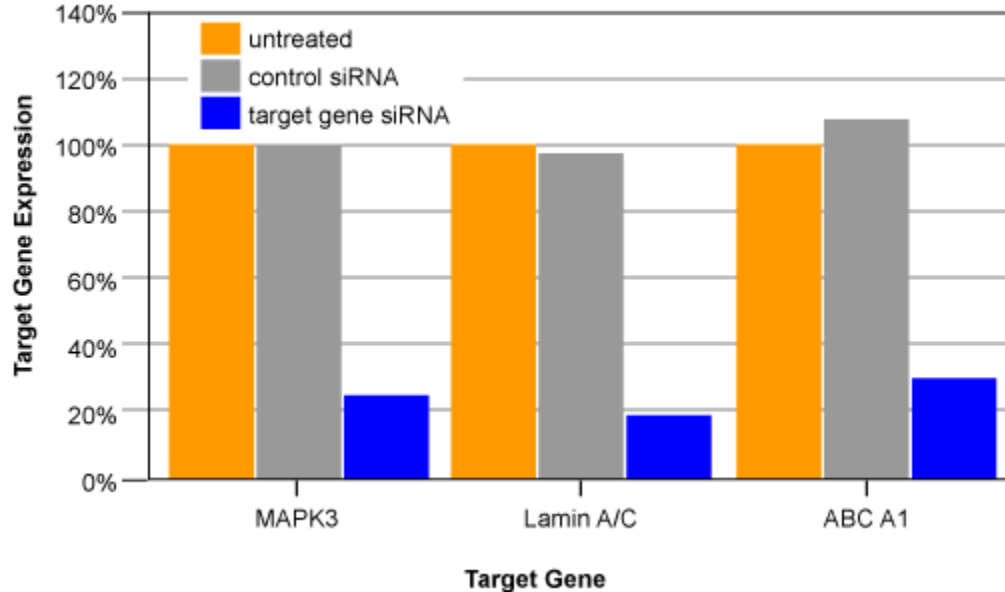


**Figure 1.**

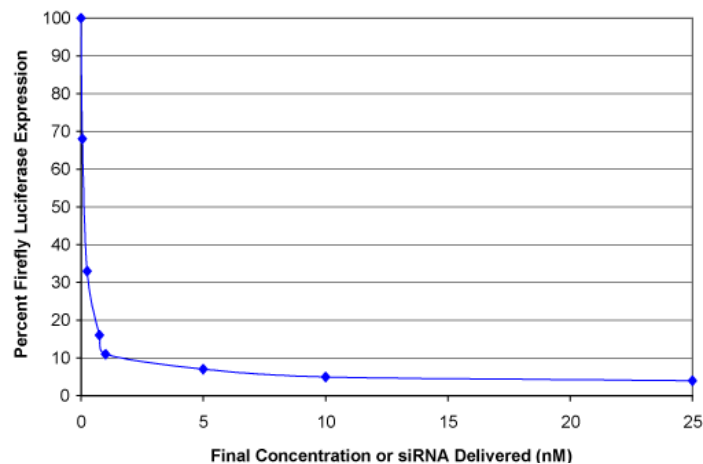
**Efficient Target Gene Knockdown in Selected Cell Lines Using *TransIT-TKO®* Reagent.** Reporter plasmids expressing both firefly and sea pansy luciferases were co-transfected into the indicated cell lines using *TransIT®* Plasmid Transfection Reagents. Targeted knockdown was achieved by transfection of an anti-firefly luciferase siRNA using the



*TransIT*-TKO® Reagent. Twenty-four hours later, firefly luciferase expression was normalized to sea pansy luciferase expression and compared to the reagent alone control.



**Figure 2. Efficient Knockdown of Endogenous Genes in Primary Hepatocytes Using *TransIT*-TKO® Reagent.** Primary mouse hepatocytes were transfected with the indicated siRNAs or a non-targeting control siRNA using the *TransIT*-TKO® Reagent. Twenty-four hours post-transfection, the amount of each mRNA was measured relative to GAPDH mRNA levels using qRT-PCR and then scaled to the expression level of the specific target mRNA in the cells alone (untreated) controls.



**Figure 3. Efficient Knockdown of Luciferase Expression Using *TransIT*-TKO® Reagent to Deliver Nanomolar Amounts of siRNA.** Reporter plasmids expressing firefly and sea pansy luciferase were transfected into COS-7 cells using the *TransIT*®-LT1 Reagent. After four hours, various concentrations of anti-firefly luciferase siRNA (0, 0.05, 0.25, 0.75, 1, 5, 10, and 25 nM) were complexed with the *TransIT*-TKO® Reagent and transfected into COS-7 cells in



their complete media. Twenty-four hours post-transfection, firefly luciferase expression was normalized to sea pansy luciferase expression and compared to the reagent alone control.

Cell Line (Source)	Endogenous Transcript	Knockdown Efficiency
BNL CL.2 (mouse liver)	MAPK1	80%
	MAPK3	83%
HeLa (human cervix)	Lamin A/C	80%
	GAPDH	80%
Hepa1c1c7 (mouse liver)	MAPK1	80%
	MAPK3	75%
	MEK1	75%
	PTEN	80%
HepG2 (human liver)	MAPK1	80%
NIH 3T3-L1	MAPK1	70%
	MAPK3	70%
Secondary Human Astrocytes	Lamin A/C	80%
Primary Mouse Hepatocytes	ABC A1	70%
	Lamin A/C	81%

**Figure 4. Knockdown of Endogenous Genes Using *TransIT*-TKO® Reagent.** Various cells were transfected with siRNAs targeting the indicated genes using the *TransIT*-TKO® Reagent, and the knockdown percentage was determined using quantitative RT-PCR.

**Figure 5. Visualization of Fluorescently Labeled siRNA.** siRNA was fluorescently labeled with the *Label IT*® siRNA Tracker Fluorescein Kit and transfected into HeLa cells using the *TransIT*-TKO® Reagent. At 24 hours, cells were fixed, counterstained, and analyzed by confocal microscopy to visualize the siRNA (green), nuclei (blue), and actin (red).

