*Trans*IT®-OligoTransfection Reagent

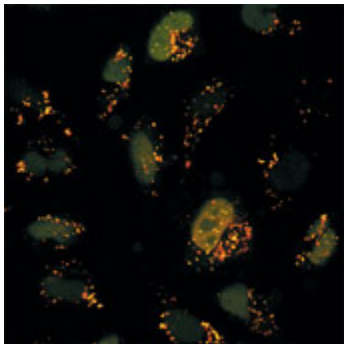
A high efficiency, low toxicity, transfection reagent optimized for oligonucleotide delivery into a wide range of cell types

- **Unique Formulation**—Maximize transfection performance of oligonucleotides into a wide range of cells.
- **Low Cellular Toxicity**—Maintain cell density and reduce experimental biases.
- **High Efficiency Delivery**—Achieve high transfection efficiency in cells to ensure experimental success.

Oligonucleotides tested:
phosphodiester DNA, phosphothioate DNA (sDNA), phosphothioate RNA (sRNA), 2'OMe RNA, 2'OMe RNA/sDNA Chimerics, and Morpholino/DNA duplexes.

Data

Figure 1. The *Trans*IT-Oligo Reagent Achieves High Transfection Efficiency. HeLa cells transfected using *Trans*IT-Oligo Reagent and *Label* IT Cy™3 and *Label* IT Fluorescein labeled phosphothioate DNA oligos in complete media for 24 hours.



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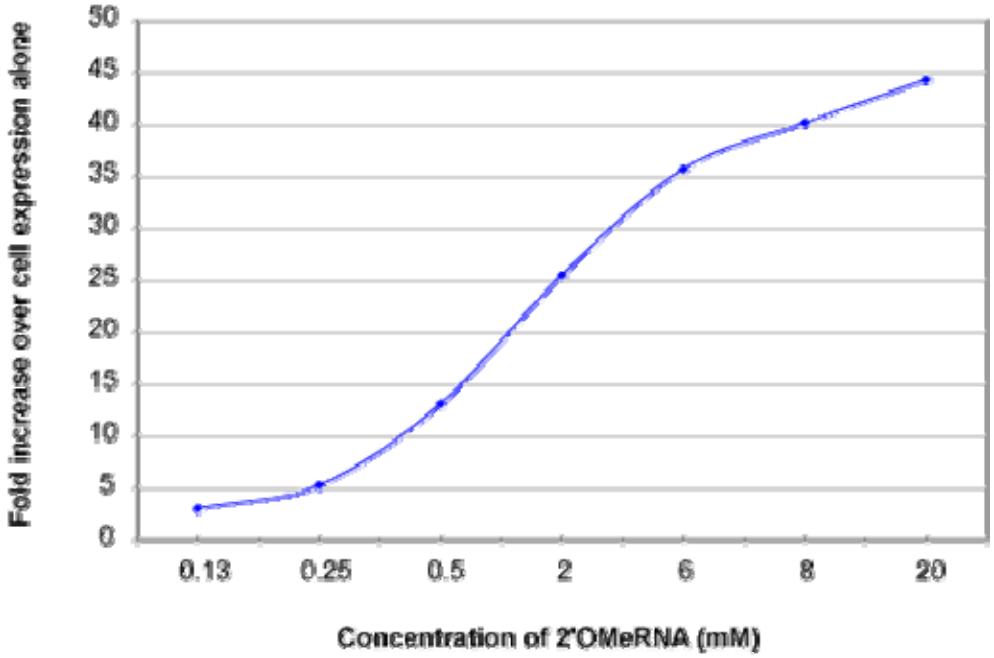

Figure 2. The *Trans*IT-Oligo Reagent Effectively Transfects a 2'OMe RNA Oligo that Blocks a Cryptic Splice Site.

The HeLa-Luc 705 reporter cell line (Kang *et al*. 1998, **37**:6235) used in this study contains a luciferase reporter construct that has the β-globin 705 intron inserted into the luciferase ORF. A mutation present at position 705 of the β-globin intron activates two cryptic splice sites within the intron that lead to the production of a spliced luciferase mRNA that is disrupted by a small intron with an in-frame stop codon, thus preventing translation of functional luciferase protein. The transfection of a 2'OMe oligonucleotide complementary to the cryptic 705 splice site inhibits splicing at the cryptic splice sites enabling the complete removal of the β-globin intron and production of a mRNA with a complete, uninterrupted luciferase ORF.

The HeLa-Luc 705 cell line was transfected with increasing amounts of the anti-705 splice site 2'OMe RNA oligo at the indicated final concentrations using the *Trans*IT-Oligo Transfection Reagent. The cells were harvested 24 hours post-transfection and assayed for luciferase activity. The increase in luciferase activity indicates effective delivery of the anti-705 splice site RNA oligo using the *Trans*IT-Oligo Reagent.