

RNAi Gene Silencing

Knockdown the Right Gene.

Choose OriGene. Comprehensive and innovative RNAi tools.

- + Genome wide coverage of Human, Mouse & Rat genes
- + Custom services for shRNA and miRNA
- + Over 600 RNAi citations
- + Scrambled control included in shRNA & siRNA kits **FREE**
- + **Guaranteed Knockdown**



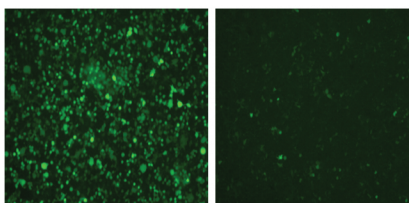
shRNA	siRNA	miRNA
3 Retroviral vector options (No reporter / GFP / RFP) 1 Lentiviral vector option (GFP / RFP reporter)	Unique 27mer siRNA duplexes produce 10-fold higher potency and specificity vs 21mers	GFP reporter with Neomycin
5 ug transfection-ready DNA per construct	2 nmol per duplex	10 ug per construct
Guaranteed knockdown (>=70%)	Guaranteed knockdown (>=70%)	Fully Sequenced
4 constructs + 1 negative scrambled control	3 duplexes + 1 negative control	
Lentiviral Packaging Kit	siTran 1.0 Transfection Rgt.	3' UTR Clones for target validation

Need Custom shRNA? **ExactHuSH** is the answer!

- + target other species
- + multiple vector selections
- + design it yourself or let us help

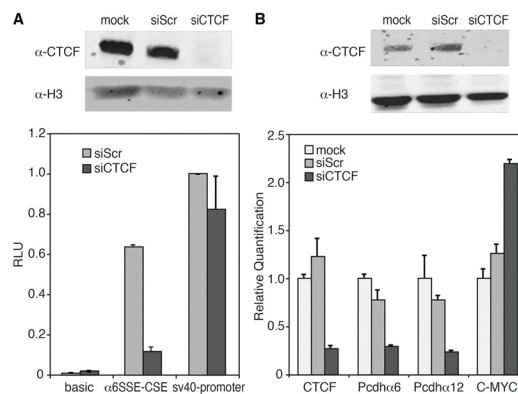
Effective Knockdown

shRNA - 29mer



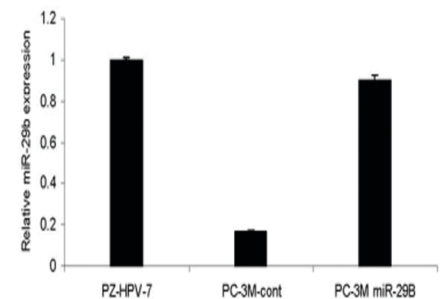
Lentiviral transduction (4 days) Vector only (left) vs shRNA targeting tGFP (right)

siRNA - 27mer



Knocking down CTCF (SR307273) down-regulated the expression of endogenous Pcdha genes. (1)

miRNA - Expression Plasmid



Exogenous miR-29b (SC400310) expression into PC-3M cells. (2)

References:

- (1) Golan-Mashiach, M. *Nucleic Acids Res.*, Apr 2012
- (2) Ru, P. et al. (2012) *Mol. Cancer Ther.*, 11: 1166 - 1173

RNAi Gene Silencing

Use the Right Substrate.

shRNA? siRNA? miRNA? With so many choices, we've put together a guide to help you decide.

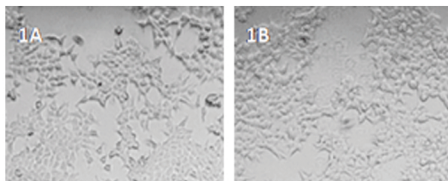
	shRNA	siRNA	miRNA
Gene-specific knockdown	Yes	Yes	No, regulates multiple genes
Transient transfection	Yes	Yes	Yes
Stable transfection	Yes	No	Yes
Infection	Yes	No	No
Renewable RNAi resource	Yes	No	Yes

Sample RNAi Citations

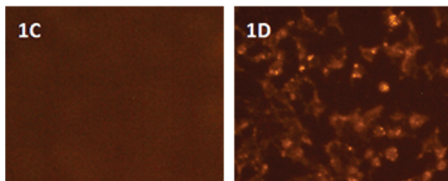
- + Tubulin Acetyltransferase α TAT1 Destabilizes Microtubules Independently of Its Acetylation Activity
Mol. Cell. Biol., March 2013 [ATAT1 shRNA]
- + miRNA-29b Suppresses Prostate Cancer Metastasis by Regulating Epithelial-Mesenchymal Transition Signaling
Mol. Cancer Ther., May 2012; 11: 1166 - 1173 [mir-29b miRNA]
- + [View all citations at www.origene.com/support/citations/](http://www.origene.com/support/citations/)
- + Desmoplakin acts as a tumor suppressor by inhibition of Wnt/ β -catenin signaling pathway in human lung cancer
Carcinogenesis, Oct 2012 [DSP siRNA]
- + Taxifolin Enhances Andrographolide-Induced Mitotic Arrest and Apoptosis in Human Prostate Cancer Cells via Spindle Assembly Checkpoint Activation
PLoS One. January 2013 [siTran1.0]

Supporting Products

siTran1.0 siRNA Transfection Reagent (TT300001) high efficiency transfection reagent



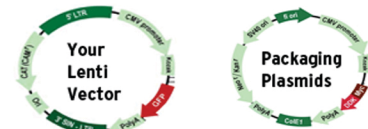
HEK293 cells were transfected with TYE 563-labeled siRNA. Phase contrast (1A, 1B) and fluorescence (1C, 1D) images for the wells with (1A and 1C) or without (1B and 1D) the addition of siTran 1.0 were taken 24 hrs post transfection.



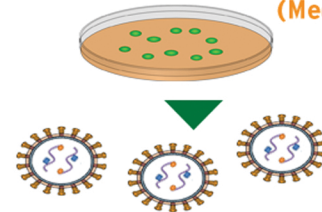
+ siTran1.0

- siTran1.0

Lentiviral Packaging Kit (TR30022) packaging plasmids & transfection reagent



Co-transfection
(MegaTran)



Pseudoviral Particles

Transduction of virtually all cell types inc. stem cells, primary cells and neuron cells