

Lenti-miR[™] microRNA **Precursor Clones**

Overexpress Individual microRNAs or Pooled Virus Library

Precursor Clone Collection

System Biosciences (SBI) has the largest commercially-available collection of microRNAs that are cloned into lentiviral vectors. SBI's constructs can be stably expressed in a wide variety of cell types, as opposed to synthetic microRNAs that can only be transiently tested in cells.

Each construct in SBI's collection consists



Native genomic sequences flanking hairpin (~400 bp)

of the native stem loop structure and 200-400 base pairs of upstream and downstream flanking genomic sequence. This unique feature ensures that the microRNAs expressed from SBI's constructs will be correctly processed in the cell into mature microRNAs.

microRNA Research



Highlights

- Largest collection of microRNA precursor clones available in lentivectors
- Native microRNA context ensures accurate and robust mature microRNA production
- Confirm positive expressing cells with copGFP for convenient sorting of transfected or transduced cells
- Easily create stable cell lines
- High-throughput microRNA phenotypic screens using pooled Lenti-miR virus library

MCF-7 Breast Cancer Cells Transduced with Lenti-miR-205





Mature miRNA Expression



MCF-7 Cells infected (MOI 5:1) with Lentivirus made from PMIRH205PA-1 (pre-miR-205) construct. Images taken after 48 hours. Expression of mature miR-205 was validated and quantitated using gPCR assays.



www.systembio.com/lentimir

Screen All microRNAs Simultaneously for Unique Phenotypes

SBI's Lenti-miR virus library contains the pooled Lenti-miR precursor clone collection in a ready-to-infect lentiviral preparation. The library is designed for studying phenotypic effects associated with the overexpression of individual microRNAs in hard-to-transfect mammalian cell lines, primary cells, non-dividing cells and even whole animal studies. The lentivirus preparation is pseudotyped with VSV-G for broad cellular tropism. The microRNA or microRNAs responsible for generating the phenotypes of interest may be recovered through simple genomic PCR using lentivector-specific primers followed by direct sequencing of microRNA precursor clones recovered.

Perform One Transduction and Easily Identify the microRNAs Involved in Your Phenotypic Screen

Each virus within the pool will express an individual microRNA precursor in its native context while preserving hairpin structures to ensure biologically relevant interactions with endogenous processing machinery and regulatory partners.



The most comprehensive microRNA Precursor Clone Collection in lentiviral vectors available anywhere.





Identification of microRNA Effectors

selected cells



Pooled Lentivirus Particles of all SBI's MicroRNA Precursors

Product Description	Catalog #	Size
MicroRNA Precursor Pooled Library (Pre-packaged) >10^7 IFUs/aliquot	PMIRHPLVA-1	4 virus aliquots
MicroRNA Precursor Pooled Library (HT, Pre-packaged) >10^7 IFUs/aliquot	PMIRHPLVAHT-1	10 virus aliquots

We Also Offer Custom Services

System Biosciences offers a wide-range of custom services to support your research, allowing you to spend less time making tools, and more time making discoveries. To learn more, visit our website at www.systembio.com/service or call us at 888-266-5066.



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Pooled Lentiviral microRNA Screens