

*Genome scale RNAi analysis affordable and accessible to all
WSU and Karmanos researchers*



Whole genome human shRNA libraries developed by The RNAi Consortium licensed from Open Biosystems by the Karmanos Cancer Institute, available through the Applied Genomics Technology Center at Wayne State University and the Karmanos Cancer Institute.

Key Features of the GIPZ shRNAmir library

- Ability to transduce dividing and non-dividing cell lines to stably express shRNA using replication incompetent lentivirus
- shRNAmir constructs targeting the entire human genome are cloned into the pGIPZ vector
- TurboGFP and shRNAmir are part of a bicistronic transcript allowing visual marking of shRNA expressing cells
- Barcode sequence in the RNAi cassette, useful to measure the presence of shRNA expression constructs in pooled experiments by microarray
- **We have no other vectors, only human GIPZ is available.**

How to order GIPZ-shRNA constructs

The next slides will cover:

Forms that must be filled out and submitted to the Wayne State University Office of Environmental Health and Safety in order to get your protocol for use of a lentivirus-based vectors reviewed and approved by the WSU Institutional Biosafety Committee

How to go to the Open Biosystems website to identify the constructs you want

Information that must be submitted to the AGTC so that your order can be processed

3 Required forms and steps for IBC Approval

- Lentivirus Use Questionnaire
- Biological Agents User Application (BAUA)
- Biosafety Laboratory Standard Operating Procedures (SOP)
- If you need additional help in preparing your SOP contact Tom Perez at OEHS or Aliccia Bollig-Fischer at the AGTC
- Submit forms to Tom Perez at OEHS. The use of lenitviral vectors requires review and approval of your protocol by the WSU Biosafety Committee (IBC).

OEHS forms available here:

<http://www.oehs.wayne.edu/biosafety/application.php>

Navigating the OB website & Ordering from the AGTC

- Search for genes of interest @ Open Biosystems' Website
- Identify the GIPZ-vector constructs that target your genes of interest

Not all constructs perform equally well. Purchase multiple and test!

- Information required to order from AGTC:
the alphanumeric identifier that is unique for every human GIPZ construct: V2L or V3L oligo ID

<http://www.openbiosystems.com/RNAi/shRNAMirLibraries/GIPZLentiviralshRNAMir/>

To Place an Order

- Excel spreadsheet with columns for gene symbol and V2L/V3L oligo ID
- Indicate bacterial stock or virus prep
- Copy of IBC approval letter
- IRB# (IRB must be received by Deborah Staples @ KCI → staplesd@karmanos.org)

Submit to: bollig@karmanos.org

Validated controls available from Open Biosystems

- Non-silencing construct (negative)
- GAPDH (positive)

Price through AGTC

- Individual vector constructs are available as frozen glycerol stock cultures of E. coli (\$20.92/construct compare with OB @ ~\$200)
- Or as fully prepared small scale viral supernatants → one-time ready-to-use, 10ml supernatant (\$418.54/construct compare with OB @ ~\$800)

Picking up your order

- When ready, your order will be picked up from the AGTC located in the basement of the C.S. Mott Bldg. (275 E. Hancock St.) by a representative from your lab
- Bring a secondary containment vessel with a lid, with rack or holder appropriate for 15ml conical or microfuge tubes
- For glycerol stocks, bring dry ice at best, ice at least

Contacts

Submit forms for review and
IBC approval to OEHS via:

Thomas Perez, MS, CIH
Director & Biosafety Officer
Wayne State University
Office of Environmental Health & Safety
5425 Woodward Ave., Suite 300
Office (main line) 313-577-1200
Desk (direct) 313-993-7469
Fax 313-993-4079

Submit order, IBC approval letter
and PO or IRB# to AGTC via:

Aliccia Bollig-Fischer, Ph.D.
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Wayne State University
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313-576-8163