

# Product Components List

## Guide-it™ CRISPR Genome-Wide sgRNA Library System

Catalog No.	Amount
632646	1 system (5 screens)

### Description

The Guide-it CRISPR Genome-Wide sgRNA Library System contains all the components necessary to perform approximately five lentiviral-based, genome-wide phenotypic knockout screens using CRISPR/Cas9 in human cell lines. Each screen contains both the human-genome-wide sgRNA library and a Cas9 expression system in our easy-to-use Lenti-X™ Single Shots format to produce cell lines stably expressing both Cas9 and the sgRNA library. The library, based on the Brunello library (Doench et al. 2016), contains >76,000 guide RNAs with four guides per gene, targeting 19,000 genes as well as non-targeting sgRNA controls.

The self-inactivating lentiviral sgRNA vector, pLVXS-sgRNA-mCherry-hyg expresses mCherry fluorescent protein to enable simple functional titer tests to better plan your screen with your specific cell lines. In addition to mCherry, a hygromycin resistance marker enables efficient selection of transduced cells. We have verified guide representation in both the plasmid library and in a transduced target cell population to be >90% within a 10-fold range to improve the power of your screens. The self-inactivating Cas9 lentiviral vector included in the Guide-it Cas9 Transfection Mix, expresses a puromycin resistance marker. A sample of Lenti-X GoStix™ Plus (Cat. No. 631280, 631281) are also included for rapid quantitation of your viral supernatants based on p24 concentration.

### Package Contents

- Guide-it Genome-Wide sgRNA Library Transfection Mix (Cat. No. 632650) (Not sold separately) [View Components >>](#)
- Guide-it Cas9 Lentiviral Transfection Mix (Cat. No. 632648) (Not sold separately) [View Components >>](#)
- pLVXS-sgRNA-mCherry-hyg Vector (632649) (Not sold separately) [View Components >>](#)
- Lenti-X 293T Cell Line (Cat. No. 632180) [View Components >>](#)
- Lenti-X GoStix Plus (Sample-Not for Sale) (Cat. No. 631279) [View Components >>](#)

For storage conditions, please see the Certificate of Analysis supplied with each component.

### Product Documents

Documents for our products are available for download at [takarabio.com/manuals](http://takarabio.com/manuals)

The following documents apply to this product:

- Guide-it CRISPR Genome-Wide sgRNA Library System User Manual
- Lenti-X 293T Cell Line Protocol-At-A-Glance
- Lenti-X GoStix Plus Protocol-At-A-Glance

### References

Doench, J *et al.*, Optimized sgRNA design to maximize activity and minimize off-target effects of CRISPR-Cas9. *Nat Biotechnol.* **34**, 184–191 (2016).

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This document has been reviewed and approved by the Quality Department.