



TransDux MAX™

Cat# LV860A-1

User Manual

Store kit at 4°C on receipt

Version 6.0
7/25/2019

A limited-use label license covers this product. By use of this product, you accept the terms and conditions outlined in the License and Warranty Statement contained in this user manual.

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Product Description

TransDux MAX™ is a next-generation virus transduction reagent that significantly improves transduction efficiency across a wide variety of cell types, including hard-to-infect cells. The system consists of SBI's original non-toxic transduction reagent TransDux and the MAX Enhancer reagent that boosts infection efficiency of target cells up to 800% (in certain tested cell types) compared to TransDux or polybrene. Simply add TransDux MAX to the cell media prior to infection and observe MAX levels of transgene expression from your cells.

List of Components

| Item | Catalog # | Volume |
|--------------|-----------|--------|
| TransDux™ | LV850A-1 | 250µL |
| MAX Enhancer | LV860A-1 | 10 mL |

Storage

The kits are shipped on blue ice and should be stored at +4°C upon receipt. Do not Freeze. Properly stored kits are stable for 12 months from the date received.

Protocol:

Adherent Cell Infection Protocol (for 24 well plate)

1. Plate 50,000 cells per well in a 24 well plate in cell culture medium the day before infection.
2. Cells should be between 50 to 70% confluent.
3. Aspirate medium from cells.
4. Combine TransDux™ and MAX Enhancer with culture medium to a final concentration of 1x. [Example: Add 2.5 µL of TransDux™ and 100 µL of MAX Enhancer to 400 µL culture medium and then transfer to each well].
5. Add virus to each well and swirl to mix.

Optional: Add increasing amounts of virus to different wells at varying MOIs (5, 10 and 20, etc.) to optimize the transduction.

6. Incubate at 37 °C for 72 h and assay for reporter expression; e.g., GFP, if present in the viral construct.
7. Aspirate off medium. Wash each well with PBS (at this point the plate can be frozen at -80.0 °C).
8. Add 100 µL of Lysis Buffer (Ultra Rapid Titer Kit, SBI Cat #LV961A-1) to each well.
9. Titer virus according to protocol given in the Ultra Rapid Titer Kit.

Suspension Cell Infection Protocol (for 24 well plate, spinoculation protocol)

1. Count 500,000 cells for each well and transfer to a sterile Eppendorf tube.
2. Spin at 1,000 x g for 5 min at RT.
3. Wash pellet with 1 mL of sterile PBS, spin at 1,000 x g for 5 min.
4. Resuspend in 400 µL of complete RPMI medium + 100 µL of MAX Enhancer and 2 µL of TransDux™
5. Add 4 µL of 1M HEPES buffer (1:125, final concentration should be 8mM).
6. Add the combined cells, HEPES buffer and TransDux MAX™ mixture to a well of a 24 well plate.
7. Add virus at required MOI.
8. Spin at 32 °C at 1,500 x g for 1.5 to 2 h.
9. Verify presence of the cells after spinoculation, they should all be at the bottom of the well.
10. Add 400 µL of complete medium to each well, pipet up and down about 10 times, then transfer contents to a sterile Eppendorf tube.
11. Spin again at 1,500 x g for 5 min.
12. Remove the supernatant. Add 400 µL of fresh complete medium (without TransDux MAX™) to resuspend the pellet and then add to a fresh well of a 24 well plate.
13. Incubate at 37 °C, 5% CO₂ incubator.

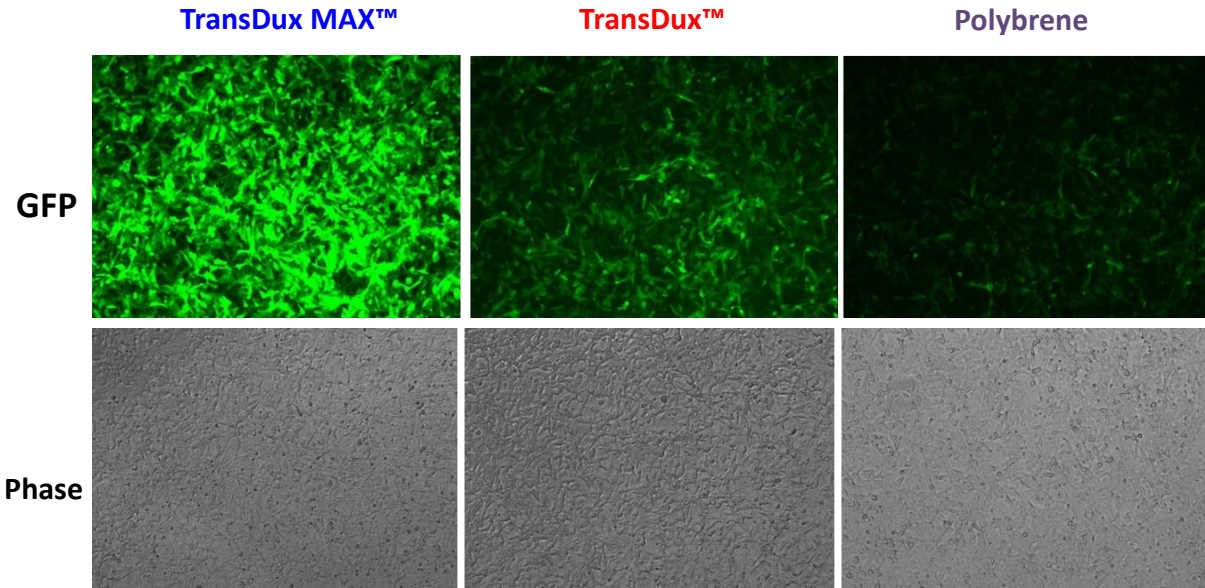
Related Products

| Application | Related Products | Website links |
|---------------------------------------|---------------------------------|---|
| Lentivirus Production Reagents | | |
| Integrating Lentiviral Packaging | pPACK™ | https://www.systembio.com/lentiviral-technology/delivery-systems/ppack/overview |
| Non-integrating Lentiviral Packaging | pPACK-ID™ | https://www.systembio.com/lentiviral-technology/delivery-systems/non-integrating |
| Transfection Reagent | PureFection™ | https://www.systembio.com/lentiviral-technology/delivery-systems/purefection/overview |
| Virus Concentration | PEG-it™ | https://www.systembio.com/lentiviral-technology/delivery-systems/peg-it/overview |
| Titering | Global UltraRapid™ Titering Kit | https://www.systembio.com/lentiviral-technology/delivery-systems/ultrarapid/overview |

Example Data

Figure 1 HT1080 cells transduced with a LV605 virus in the presence of TransDux MAX, TransDux or Polybrene. LV605 contains both a **A)** GFP and **B)** RFP reporter. Images from both channels are shown.

A.



B.

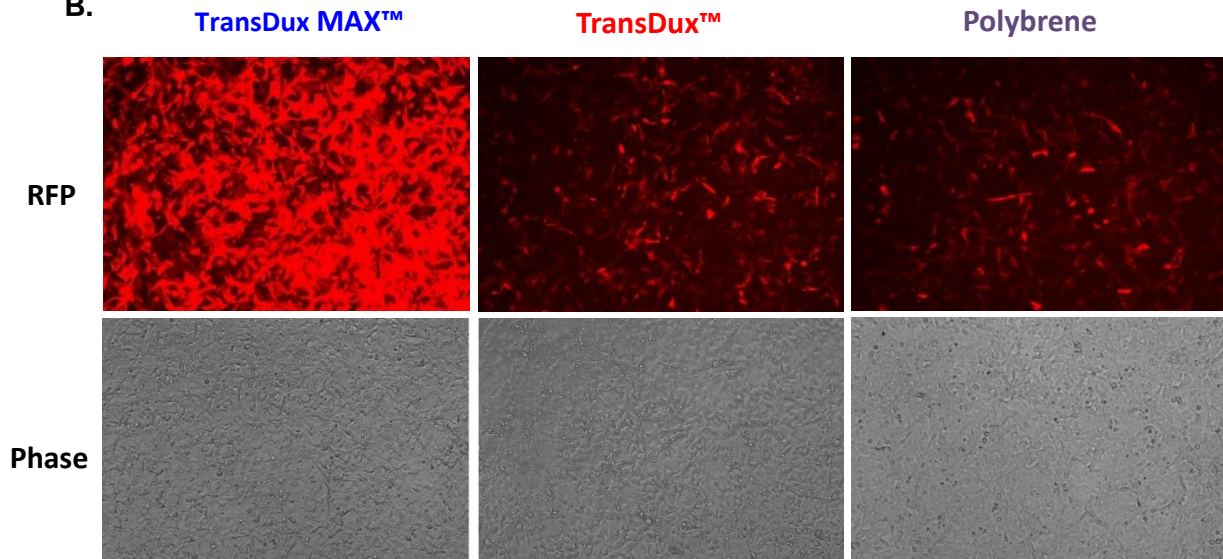


Figure 2. HT1080 cells transduced with a BLIV713 virus in the presence TransDux MAX, TransDux or Polybrene. BLIV713 contains a GFP reporter.

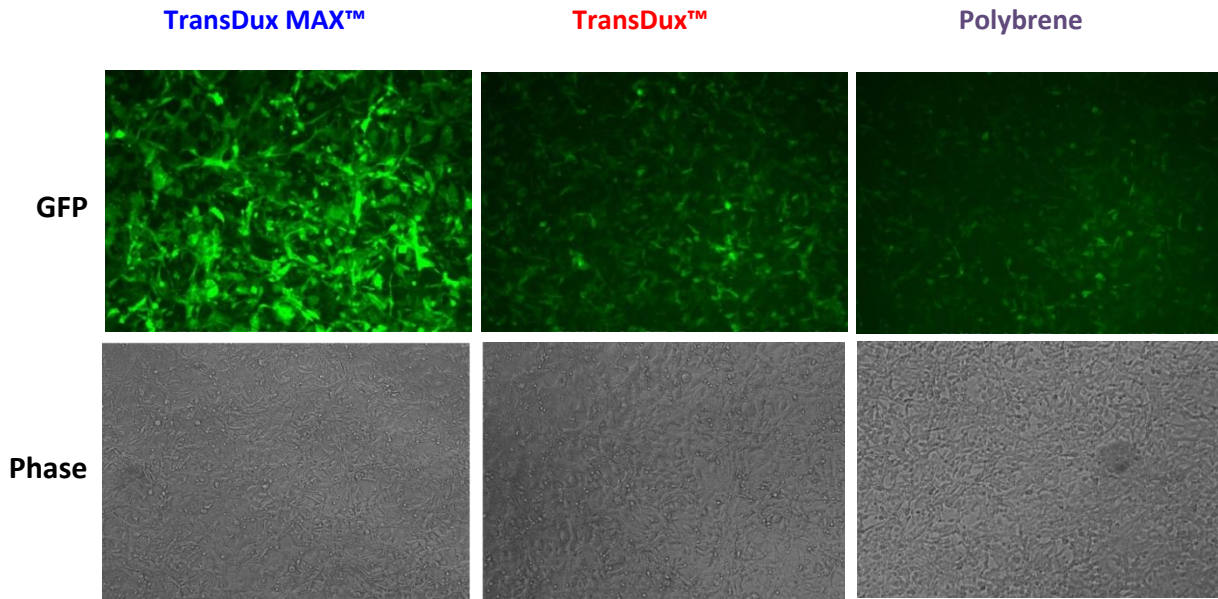


Figure 3. Jurkat cells transduced with a LV605 virus in the presence of Polybrene, TransDux or TransDux MAX LV605 contains a RFP reporter. A spinoculation protocol was used for this experiment:

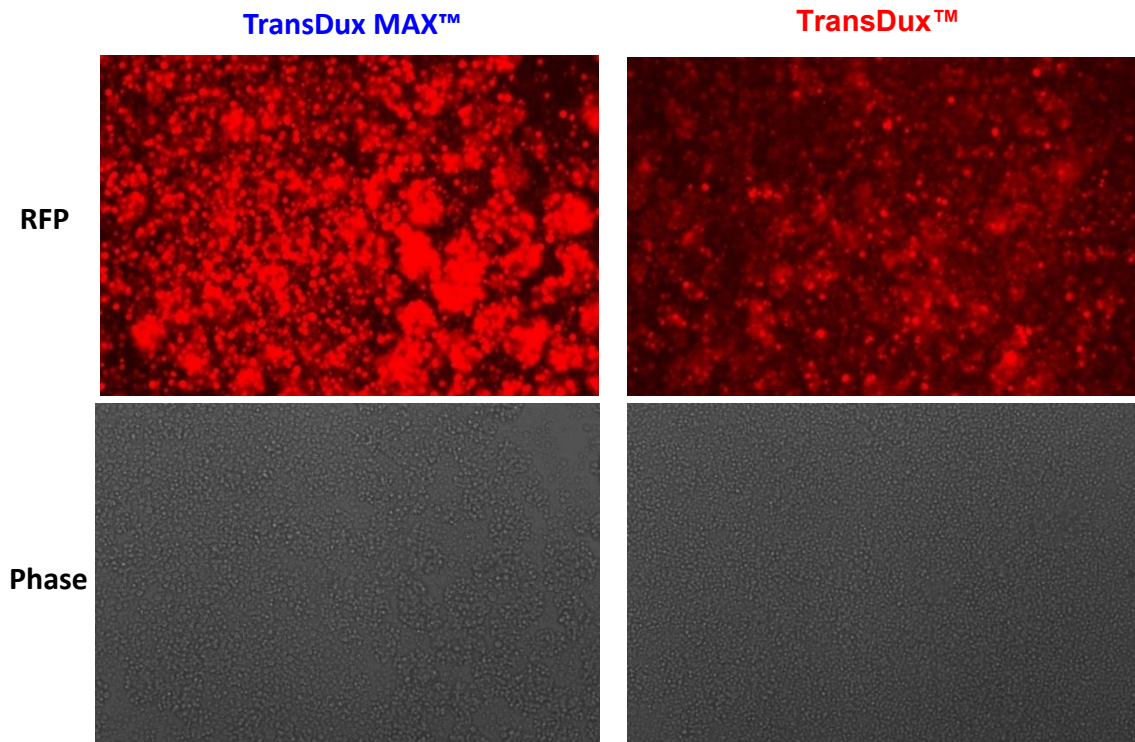
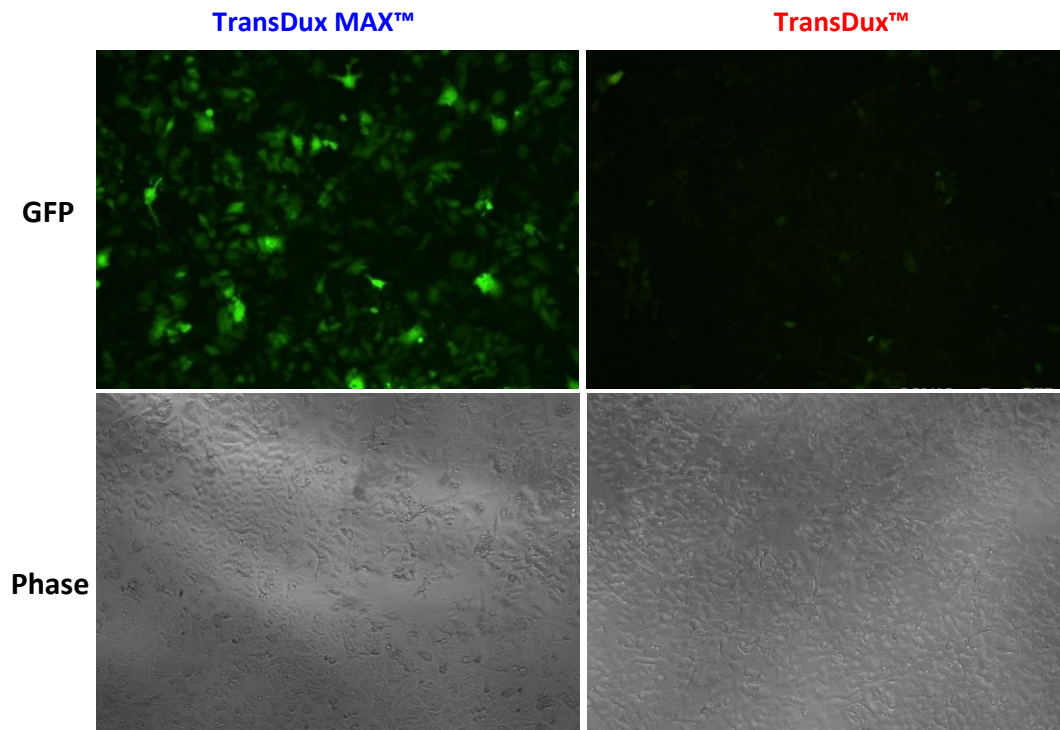


Figure 4. HEPG2 cells transduced with a LV605 virus in the presence of either TransDux or TransDux MAX. LV605 contains a GFP reporter.



Technical Support

For more information about SBI products and to download manuals in PDF format, please visit our web site:
<http://www.systembio.com>

For additional information or technical assistance, please call or email us at:

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Limited Use License

Use of the TransDux MAX™ (*i.e.*, the “Product”) is subject to the following terms and conditions. If the terms and conditions are not acceptable, return all components of the Product to System Biosciences (SBI) within 7 calendar days. Purchase and use of any part of the Product constitutes acceptance of the above terms.

The purchaser of the Product is granted a limited license to use the Product under the following terms and conditions:

- The Product shall be used by the purchaser for internal research purposes only. The Product is expressly not designed, intended, or warranted for use in humans or for therapeutic or diagnostic use.
- The Product may not be resold, modified for resale, or used to manufacture commercial products without prior written consent of SBI.
- This Product should be used in accordance with the NIH guidelines developed for recombinant DNA and genetic research.

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