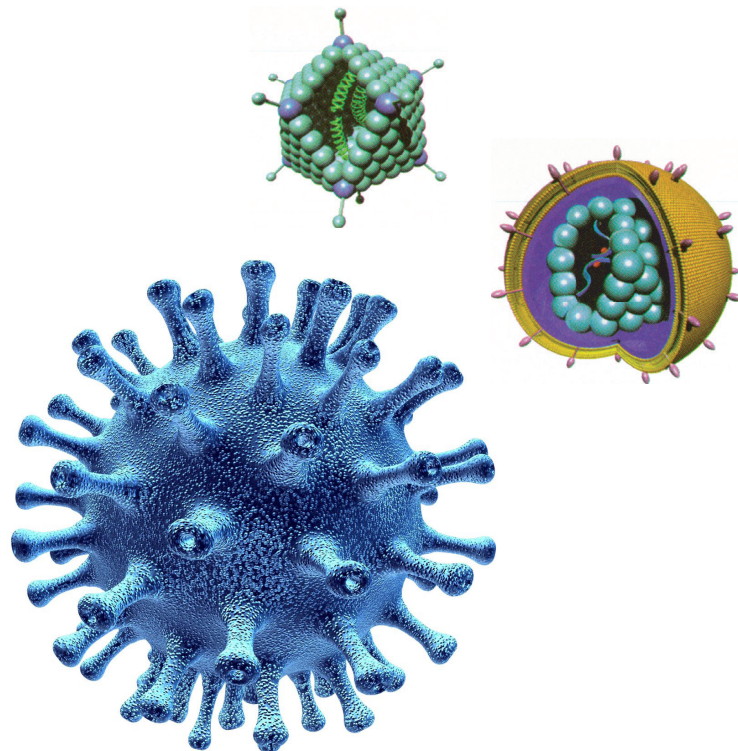




# Transduction - Infection tools

**OZBIOSCIENCES**  
The art of delivery systems



Enhance, synchronize and accelerate transduction/infection  
Production, capture, concentration & storage

## VIRAL APPLICATIONS

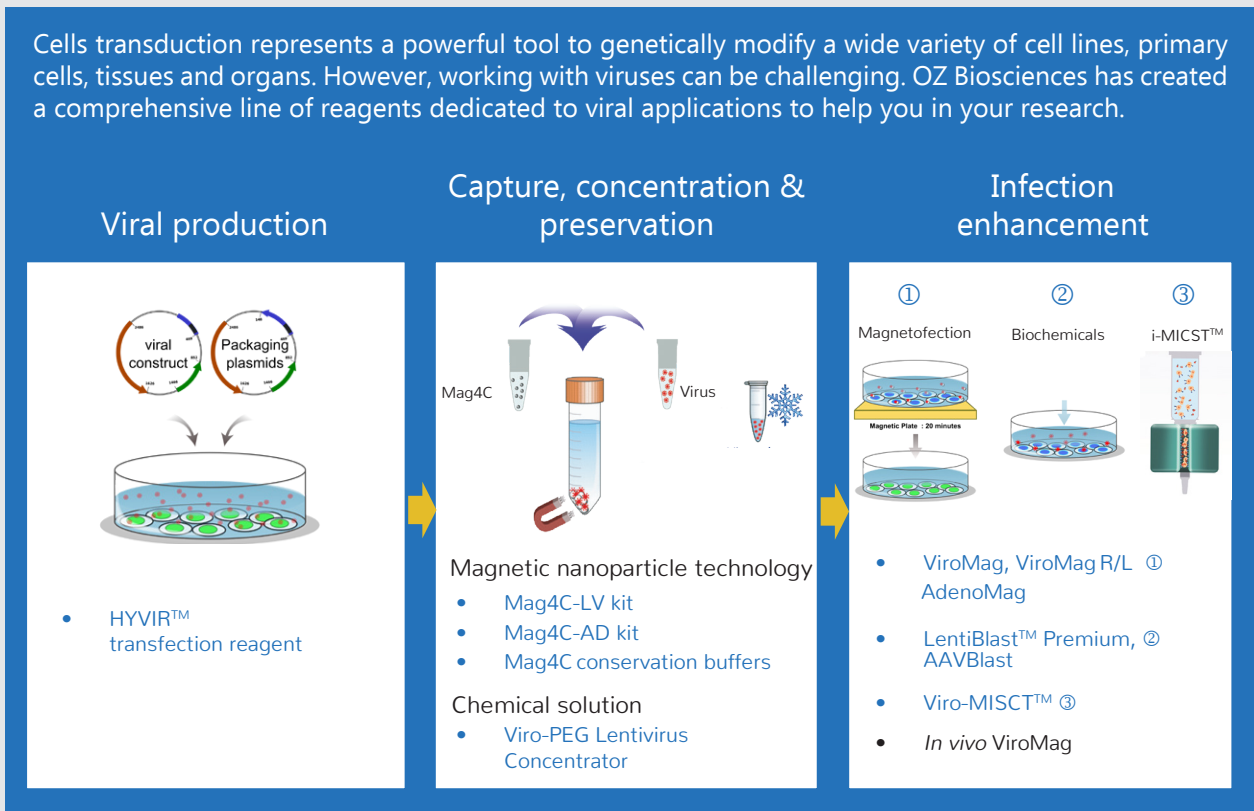
PRODUCTION  
CAPTURE  
INFECTION



# Production - Capture

## VIRAL WORKFLOW

Cells transduction represents a powerful tool to genetically modify a wide variety of cell lines, primary cells, tissues and organs. However, working with viruses can be challenging. OZ Biosciences has created a comprehensive line of reagents dedicated to viral applications to help you in your research.



## Mag4C™

Capture Efficiency: 80-99%

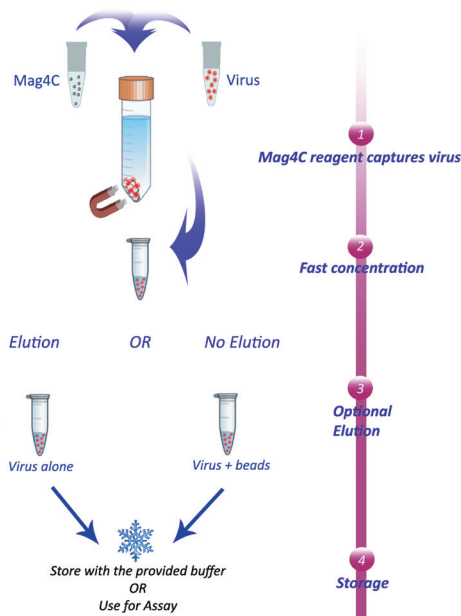


Figure 1: Mag4C Protocol

## Capture, Concentrate & Store Viruses

Mag4C-LV (Lentivirus) & Mag4C-AD (Adenovirus) reagents are based on a magnetic virus concentration technology (magnetic nanoparticles).

- Concentration of viruses by magnetic capture in 30-45 minutes
- 80 to 99% of viral capture and recovery
- Reduce handling steps - Avoid ultracentrifugation, precipitation and chemicals
- Improve virus preservation

Mag4C conservation buffers (LV & AD) can be ordered separately from the kit.

These buffers preserve virus infectivity during storage and minimize loss of viral titers during storage and freeze/thaw cycles.

# Concentration - Transduction

## Large-Scale Virus Production

**HYVIR™** is a novel lipid-based transfection kit dedicated to enhance viral particles production in HEK-293T. Its specific formulation allows an optimal plasmid compaction, protection and delivery.

- Performant: reach high-titer functional virus production.
- Co-transfect 4 plasmids at the same time with a great efficiency.
- Reliable & Reproducible: easily scalable for production in large volumes.

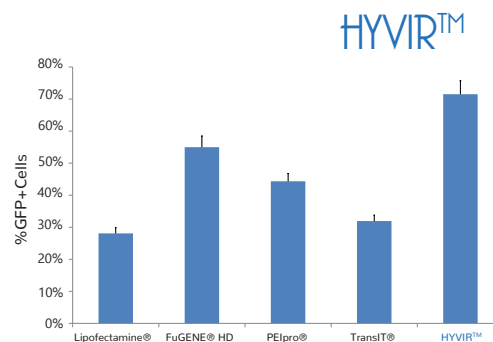


Figure 3: Lentiviral production HYVIR™ vs. competitors

## Transduction Enhancer

**LentiBlast™ Premium & AAVBlast** are chemical transduction enhancers ideal for CAR-T and stem cell therapies. This novel patented formulation neutralizes electrostatic repulsions between membrane and viral particles. As a result it enhances viral fusion with cell membrane.

- Maximize lentivirus and AAV infection efficiency for hard-to transduce cells.
- Maximize cell viability: non-toxic.
- Save effort & money: achieve same transduction results with a lower viral titer.

## AAVBlast & LentiBlast™ Premium

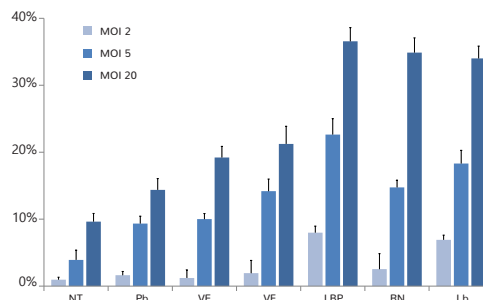


Figure 3: Comparison of transduction enhancers of CD34+ cell line with lentiviral vector

NT, Non Treated infected cells; Pb, Polybrene; VE, ViralEntry; VF, VectoFusin; LBP, LentiBlast Premium; RN, RetroNectin; Lb, LentiBOOST.

## Transduction Enhancers

Based on the Magnetofection™ technology **ViroMag**, **ViroMag R/L** and **AdenoMag** reagents allow to concentrate the complete applied dose of viral particles onto cells within minutes.

- Highly enhance transduction efficiency with low vector doses.
- Accelerate the transduction kinetics.
- Concentrate viruses onto cells in minutes.
- Synchronize cell absorption/infection.
- Extend tropisms to non-permissive cells.

«Magnetic Nanoparticles Enhance Adenovirus Transduction *In Vitro* and *In Vivo*.» Sapet *et al.* (2011) Pharm. Res.

«Synchronous infection of SIV and HIV *in vitro* for virology, immunology and vaccine-related studies.»

*T Lymphocyte CD4+* | Sacha J.B. *et al.* (2010) Nat Protoc.

## ViroMag & AdenoMag

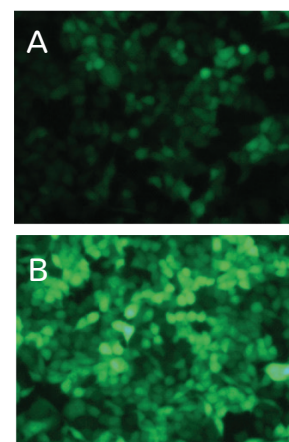


Figure 4: HeLa cells infected with A) Lentivirus only B) Lentivirus+ViroMag

## Using a magnetic cell purification system?

i-MICST™ technology combines cell sorting and genetic modification in one simple and reliable integrated system. The **Viro-MICST™** reagent allows efficient and specific transduction of target cells directly on magnetic cell-purification columns.

- Transduction & isolation in one integrated system
- Reduce cell manipulation steps, minimize cell stress and save time
- Ideal for sensitive cell types such as primary and stem cells

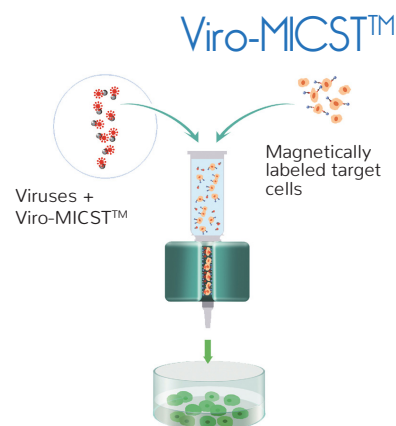


Figure 5: Viro-MICST™ technology

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