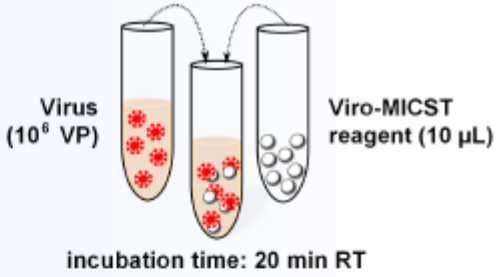
Viro-MICST™ Quick Protocol

This quick protocol is suitable for 1x10^6 cells on a MS column (MACS® column) with a MOI of 1*. Please consult the full instruction manual for detailed information.

Viro-MICST/Virus Complexes formation

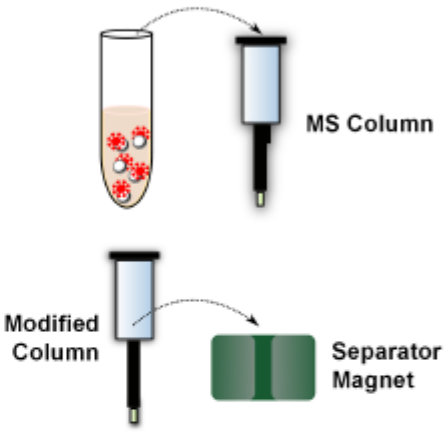
1. Add 10 µL of Viro-MICST in a 1.5 mL tube
2. Add Virus suspension to Viro-MICST.
3. Mix immediately by pipetting
4. Incubate 20 min at room temperature.

(for volume>60 µL refer to instruction manual)



MS column loading with complexes

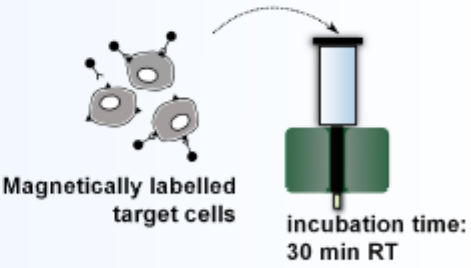
5. Place a MS column in a 15 mL tube
(do not position column onto magnet)
6. Load complexes of Viro-MICST/VP onto the column
7. Allow complexes to diffuse within the matrix
8. Position the column into separator magnet.



Loading/Sorting/Transducing target cells

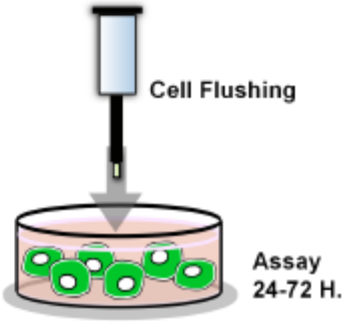
9. Load magnetically labelled cells into the modified column
10. Wash column with complete medium
11. Incubate column for 30 min onto the magnetic separator.

(refer to column manufacturer for magnetic cell labelling)



Cell flushing and incubation until assay

12. Remove the column from the magnetic separator and place it into a new 15 mL tube
13. Flush the cells
14. Incubate cells under standard culture conditions until assay evaluation



Next Page

***NOTES:**
This short protocol is suitable for transducing 10^6 cells on a MACS® MS column* with a MOI of 1.
Please consult manual for detailed information.
The Viro-MICST™ protocol is depicted as a two-steps process:

I / Cell preparation and Pre-enrichment of the target cells
The first step consists in a pre-enrichment of the target cell population that is only required if the percentage of the cell population to be purified and infected represents less than 50% of the total cell population and/or if the degree of purity to be reached is above 90%. OZ Biosciences does not provide magnetic cell separation systems, please refer to the manufacturer instructions protocols for this step.
1. Magnetically label your cells following the manufacturer's instructions
2. If cells to be purified < 50% of total cells, and/or cell purity to be reached is > 90%, proceed to a pre-enrichment step on non-modified column(s)

II/ Viro-MICST™ procedure
The second step mainly consists in reaching high purity and simultaneously infecting the target cell population (see figure)

Table 1: Suggested labeled-cell number, MOI and Viro-MICST™ conditions.

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MACS column	Magnetically labeled cell Number	Infectious particles	Viro-MICST™ Volume (µL)	** Complexes Volume
MS	1 x 10^6	1 x 10^6	10	60 µL
LS	2.5 x 10^6	2.5 x 10^6	25	400 µL
XS	1 x 10^7	1 x 10^7	100	6.2 mL

** Complexes volume represents the void volume of MACS® cell separation column

**MACS® is a registered trademark owned by Miltenyi Biotec GmbH and the use of MACS® column is proprietary and patented technology. For any further licensed of MACS® system, please contact Miltenyi.*

For more details about the protocol and optimization procedure, the complete instruction manual is accessible on OZ Biosciences website:
www.ozbiosciences.com

If you have any questions, please do not hesitate to contact our technical support department
tech@ozbiosciences.com

Contact information FRANCE & EUROPE	Contact information USA
•**Technical service:** +33(0) 486 948 514 tech@ozbiosciences.com •**Customer service:** +33(0) 486 948 516 contact@ozbiosciences.com	•**Technical service:** +1(858) 246 7840 techUSA@ozbiosciences.com •**Customer service:** +1(858) 246 7840 contactUSA@ozbiosciences.com