*Trans*IT®-Jurkat Transfection Reagent

Quick Reference Protocol

Instructions for MIR 2120, 2122, 2124, 2125, 2126

Full protocol, SDS and Certificate of Analysis available at mirusbio.com/2120

SPECIFICATIONS

Storage	Store *Trans*IT®-Jurkat Reagent tightly capped at 4°C. ***Before each use***, warm to room temperature and vortex gently.
Product Guarantee	1 year from the date of purchase, when properly stored and handled.

▸ PLASMID DNA TRANSFECTION PROTOCOL

Full protocol and additional documentation available at ***mirusbio.com/2120***

Fill in volumes below based on culture vessel used for transfection (Table 1).

A. Plate cells

1. Plate cells in ___ml complete growth medium (per well) at a density of 2–4 × 10^5 cells/ml.
2. Culture overnight.
   Optional: Alternatively, plate cells at a density of 4–8 × 10^5 cells/ml complete growth medium, just prior to transfection.

B. Prepare *Trans*IT®-Jurkat Reagent:DNA complexes

1. Warm *Trans*IT®-Jurkat to room temperature and vortex gently.
2. Place ___µl of OptiMEM® I Reduced-Serum Medium in a sterile tube.
3. Add ___µl plasmid DNA. Mix gently by pipetting.
4. Add ___µl of *Trans*IT®-Jurkat Reagent. Mix gently by pipetting.
5. Incubate at room temperature for 15-30 minutes.

C. Distribute complexes to cells

1. Add *Trans*IT®-Jurkat:DNA complex mixture drop-wise to different areas of the well.
2. Gently rock plate for even distribution of complexes.
3. Incubate 24-72 hours.
4. Harvest cells and assay as required.

Table 1. Recommended starting conditions

Culture vessel	24-well plate	12-well plate	6-well plate
Surface area	1.9 cm^2	3.8 cm^2	9.6 cm^2
Complete growth medium	0.5 ml	1 ml	2.5 ml
Serum-free medium	50 µl	100 µl	250 µl
DNA (1 µg/µl stock)	0.5 µl	1 µl	2.5 µl
***Trans*IT®-Jurkat Reagent**	1.5 µl	3 µl	7.5 µl

▸ Transfection Optimization

Determine the best *Trans*IT®-Jurkat Reagent:DNA ratio for each cell type. Start with 3 µl of *Trans*IT®-Jurkat Reagent per 1 µg of DNA. Vary the concentration of *Trans*IT®-Jurkat Reagent from 1–5 µl per 1 µg DNA to find the optimal ratio.

*Trans*IT®-Jurkat reagent also works well for additional cell lines of hematopoietic origin such as K562, RAW264.7 and THP-1.

For additional optimization tips, see full protocol.

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NOTES

Reagent Agent®

Reagent Agent® is an online tool designed to help determine the best solution for nucleic acid delivery based on in-house data, customer feedback and citations.

Learn more at: mirusbio.com/ra

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