# *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.<br>***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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