

# TransIT®-Jurkat Transfection Reagent

## Quick Reference Protocol

Instructions for MIR 2120, 2124, 2125, 2126

Full protocol, MSDS and Certificate of Analysis available at [mirusbio.com/2120](http://mirusbio.com/2120)



### SPECIFICATIONS

Storage	Store TransIT®-Jurkat Reagent tightly capped at 4°C. <b>Before each use</b> , 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](http://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  $2-4 \times 10^5$  cells/ml.
2. Culture overnight.

**Optional:** Alternatively, plate cells at a density of  $4-8 \times 10^5$  cells/ml complete growth medium, just prior to transfection.

##### B. Prepare TransIT®-Jurkat Reagent:DNA complexes

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

##### C. Distribute complexes to cells

1. Add TransIT®-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 <sup>2</sup>	3.8 cm <sup>2</sup>	9.6 cm <sup>2</sup>
Complete growth medium	0.5 ml	1 ml	2.5 ml
Serum-free medium	50 $\mu$ l	100 $\mu$ l	250 $\mu$ l
DNA (1 $\mu$ g/ $\mu$ l stock)	0.5 $\mu$ l	1 $\mu$ l	2.5 $\mu$ l
TransIT®-Jurkat Reagent	1.5 $\mu$ l	3 $\mu$ l	7.5 $\mu$ l

#### ▶ Transfection Optimization

Determine the best TransIT®-Jurkat Reagent:DNA ratio for each cell type. Start with 3  $\mu$ l of TransIT®-Jurkat Reagent per 1  $\mu$ g of DNA. Vary the concentration of TransIT®-Jurkat Reagent from 1–5  $\mu$ l per 1  $\mu$ g DNA to find the optimal ratio.

TransIT®-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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## Reagent Agent<sup>®</sup>

Reagent Agent<sup>®</sup> 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](http://mirusbio.com/ra)

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