PANC-1 Transfection Kit (for Non-endocrine Pancreatic Cancer)

Catalog No. 3225  Size: 0.5 ml
Catalog No. 3226  Size: 1.5 ml
Catalog No. 7076  Size: 8.0 ml

Contents and Shipping:
PANC-1 Transfection Kit includes PANC-1 Transfection Reagent (0.5 ml / 1.5 ml / 8.0 ml), Transfection Enhancer (0.5 ml), and Complex Condenser (0.5 ml). PANC-1 Transfection Reagent is supplied in liquid form at a concentration of 0.3 mg/ml, shipped at ambient temperature.

Description:
Lipid-based proprietary formulation optimized for transfection of PANC-1 cell line.

Product Qualification:
PANC-1 Transfection Reagent is tested functionally by transfection of PANC-1 cells with a small interfering RNAs targeting 3 different genes (Lamin A/C, GAPDH, Cyclophilin B). Transfection Reagent is tested for absence of nuclease contamination and microbial contamination.

Storage:
Store reagent at 4°C upon receipt. If stored properly, reagent is stable for 6 months.

Intended Use:
For in vitro use only.

MSDS:
MSDS documents are available online at www.altogen.com

In Vivo Transfection Kits (for compound testing in rodents):
- Catalog #5010 / 5011 / 5012 - Lipid In Vivo Transfection Kit
- Catalog #5020 / 5021 / 5022 - Polymer In Vivo Transfection Kit
- Catalog #5030 / 5031 / 5032 - Nanoparticle In Vivo Transfection Kit
- Catalog #5040 / 5041 / 5042 - PEG-Liposome In Vivo Transfection Kit
- Catalog #5050 / 5051 / 5052 - Pancreas In Vivo Transfection Kit
- Catalog #5060 / 5061 / 5062 - Liver In Vivo Transfection Kit
- Catalog #5070 / 5071 / 5072 - Kidney In Vivo Transfection Kit

Transfection Controls and Recommended Products:
- Catalog #4060 - GFP-expressing plasmid DNA (25 ug)
- Catalog #4061 - Cell Cycle Arrest siRNA (5 nmol)
- Catalog #4062 - Apoptosis Inducing siRNA (5 nmol)

To Place an Order:
Both domestic (USA) and international orders can be placed online (www.altogen.com) using credit card payment. Purchase Order (PO) can be faxed at (702) 989-0841 (for USA only).

Transfection Resource:  www.altogen.com/transfection-resource

Altogen Labs. GLP Compliant Pre-clinical CRO Laboratory Services:  www.altogenlabs.com
Recommended Transfection Protocols (for 24-well plate):

### PANC-1 Standard Transfection Protocol (24-well plate):

1. Plate 10,000 - 15,000 PANC-1 cells per well in 0.5 ml of complete growth medium 12-24 hours prior to transfection
2. Wash with 1xPBS and add 0.5 ml of fresh growth medium
3. Prepare transfection complexes by mixing 40 µl of serum-free medium, 5 µl of transfection reagent, and
   - 600 ng DNA (or mRNA), or
   - 30 nM - 50 nM of siRNA (or microRNA)
   *Referred to a final volume including growth medium
4. Incubate transfection complexes at RT for 15 - 30 minutes
5. Optional: Add 2 µl of Complex Condenser. This reagent reduces the size of transfection complex, therefore increasing transfection efficiency; however it may increase cell toxicity
6. Add prepared transfection complexes to 0.5 ml of complete growth medium with PANC-1 cells (from step 2)
7. Incubate cells at 37°C in a humidified CO₂ incubator
8. Assay for phenotype or target gene expression 48 - 72 hours after transfection

### PANC-1 Reverse Transfection Protocol (24-well plate):

1. Prepare PANC-1 cell suspension:
   - a. Trypsinize cells (0.05% Trypsin) for 3-5 minutes at 37°C
   - b. Dilute in complete growth medium to 5 x 10⁴ cells/ml
2. Prepare transfection complexes by mixing 40 µl of serum-free medium, 5 µl of transfection reagent, and
   - 600 ng DNA (or mRNA), or
   - 30 nM - 50 nM of siRNA (or microRNA)
   *Referred to a final volume including growth medium
3. Incubate transfection complexes at RT for 15 - 30 minutes
4. Optional: Add 2 µl of Complex Condenser. This reagent reduces the size of transfection complex, therefore increasing transfection efficiency; however it may increase cell toxicity
5. Plate 20,000 - 30,000 cells per well in 0.5 ml of complete growth medium (from step #1) into culture plate
6. Add prepared transfection complexes (from step 3 or 4)
7. Incubate cells at 37°C in a humidified CO₂ incubator
8. Assay for phenotype or target gene expression 48 - 72 hours after transfection

Optional:
- Transfection efficiency can be increased by addition of Transfection Enhancer reagent. Add 2 µl of Transfection Enhancer reagent 12-24 hours after transfection

If the viability of PANC-1 cells being transfected is affected at 16 - 24 hours post-transfection, the level of cytotoxicity can be decreased by changing the growth medium and eliminating redundant exposure of cells to transfectant

### Scaling Up or Down Transfections:

<table>
<thead>
<tr>
<th>Culture Vessel Surface Area (cm²)</th>
<th>Volume of Growth Medium (ml)</th>
<th>Transfection Reagent (µl)</th>
<th>Complex Condenser (µl)</th>
<th>Transfection Enhancer (µl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-well, 0.3 cm x cm</td>
<td>0.12</td>
<td>1.4</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>24-well, 2 cm x cm</td>
<td>0.5</td>
<td>5</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>12-well, 4 cm x cm</td>
<td>1</td>
<td>10</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>6-well, 10 cm x cm</td>
<td>3</td>
<td>30</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>60-mm, 20 cm x cm</td>
<td>5</td>
<td>50</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>10-cm, 60 cm x cm</td>
<td>15</td>
<td>160</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>

### Optimizing Transfection:

To obtain the highest transfection efficiency, optimize transfection conditions by varying PANC-1 cell density and amount of transfection reagent. High passage of PANC-1 cells and use of antibiotics (or growth factors) may require using larger volumes of PANC-1 transfection reagent per reaction.

### Limited Use Label License:

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