NANOCIN PLASMID

Plasmid transfection protocol

FOR TECREA PRODUCTS TNP-250, TNP-500 AND TNP-1000

Product information

Nanocin PLASMID is an innovative transfection reagent dedicated to the efficient and non-toxic transfection into a range of mammalian cells, including primary cells and other sensitive cells. **For research use only.**

Quality control

Each batch is tested using biophysical methods and by ensuring efficient delivery of GFP encoding plasmid into HeLa cells, assessed by both microscopy and flow cytometry.

Shipping, storage and shelf life

Nanocin products are shipped at room temperature, stored at 4ºC and are stable for at least one year. The expiry date is indicated on the tube label.

Safety

Nanocin PLASMID shows very low toxicity in a range of assays. See MSDS for more details and handling instructions.

Technical support and scientific advice

Tecrea provides extensive technical support and scientific guidance for any experiments involving **Nanocin** products. Please contact us for more information.

Technical resources

Frequently asked questions
Ask a scientist

Helpful information

Save time and increase experiment efficiency with **Nanocin PLASMID's** rapid protocol (see next page).

Nanocin PLASMID products are effectively non-toxic, meaning they can facilitate multiple transfections.

Nanocin PLASMID products are for research use only but compatible with clinical development, meaning you can carry research from lab to clinic with confidence.

Contents and ordering

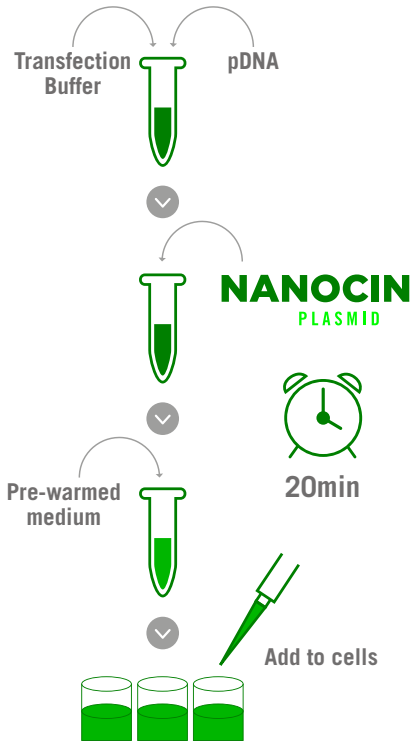
Unit size (mL)	Transfections*	Cat No.
0.25	50-75	TNP-250
0.5	100-150	TNP-500
1.0	200-300	TNP-1000
10.0	2000-3000	TNP-10000

*Approximate number based on 12-well plate

Related products

Product	Cat No.
Nanocin RNA	TNR-250, TNR-500, TNR-1000
Nanocin PRO (for protein & peptide delivery)	TNPRO-250, TNPRO-500
Nanocin SM (for small molecule delivery)	TNSM-250, TNSM-500

Protocol overview



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Standard
PLASMID TRANSFECTION PROTOCOL

Use this protocol to transfect plasmid DNA into mammalian cells after the cells have recovered from splitting or seeding. The details here are for a 12-well plate format. For other formats, see table below. All volumes are given per well.

Set-up

- Seed and grow cells to 60-80% confluence (for low-confluence experiments see notes below).
- Vortex **Nanocin PLASMID** reagent for 10 seconds and centrifuge briefly. Place reagent on ice.

START Transfection

Step 1. Prepare transfection mixture for 12-well plate (example): Dilute 1 µg plasmid DNA in Transfection Buffer to a final volume of 47.5 µl. Mix thoroughly by adjusting pipette to 50µl and pipetting the full volume up and down 5-10 times. Place tube on ice. Add 2.5 µl of **Nanocin PLASMID** reagent so volume totals 50 µl. Mix thoroughly, pipetting the full volume up and down 5-10 times. Incubate for 20 minutes on ice.

Step 2. Transfect: Transfer tubes from ice to rack at room temperature. Add 950 µl of pre-warmed growth medium to each tube prepared in step 1 so the volume total is 1000µl in each. Mix thoroughly. Remove old growth media from wells. Immediately add diluted transfection mixture by pipetting gently onto well walls.

Incubate plates as usual for 24-72 hours.

Rapid
PLASMID TRANSFECTION PROTOCOL

Use this rapid protocol to transfect plasmid into mammalian cells at the time of splitting or seeding. The rapid protocol saves at least one day of experiment time and reduces the process by several steps. The details here are for a 12-well plate format. For other formats, see table below. All volumes given are per well.

Set-up

- Vortex **Nanocin PLASMID** reagent for 10 seconds and centrifuge briefly. Place reagent on ice.

START Transfection

Step 1. Prepare transfection mixture for 12-well plate (example): Dilute 1 µg plasmid DNA in Transfection Buffer to a final volume of 47.5 µl. Mix thoroughly by pipetting the full volume up and down 5-10 times. Place tube on ice. Add 2.5 µl of **Nanocin PLASMID** reagent so volume totals 50 µl, Mix thoroughly, pipetting the full volume up and down 5-10 times. Incubate for 20 minutes on ice. While the transfection mixture incubates, prepare a cell suspension in growth medium at 4x105 cells/ml (trypsinise first if necessary). Then add 500 µl of suspended cells to each well.

Step 2. Transfect: Transfer tubes from ice to rack at room temperature. Add 450 µl pre-warmed growth medium to each tube prepared in step 1 so each tube totals 500µl volume, and mix thoroughly. Add drop-by-drop to cells in the well, gently swirling the plate to mix until the volume totals 1ml. Incubate plates as usual for 24-72 hours.

Contents and ordering

Plate	Confluence	Well surface area	Media (Vol/Well)	Transfection mix volume	Fresh media volume	Plasmid transfection	
						pDNA	Nanocin PLASMID
24-well	30-60%*	2 cm^2	500 µl	19 µl	481 µl	0.38 µg	0.94 µl
	60-80%	2 cm^2	500 µl	25 µl	475 µl	0.5 µg	1.25 µl
12-well	30-60%*	4 cm^2	1 ml	38 µl	962 µl	0.75 µg	1.88 µl
	60-80%	4 cm^2	1 ml	50 µl	950 µl	1 µg	2.5 µl
6-well	30-60%*	10 cm^2	2.5 ml	94 µl	2406 µl	1.88 µg	4.69 µl
	60-80%	10 cm^2	2.5 ml	125 µl	2375 µl	2.5 µg	6.25 µl
60-mm	30-60%*	20 cm^2	5 ml	188 µl	4812 µl	3.8 µg	9.4 µl
	60-80%	20 cm^2	5 ml	250 µl	4750 µl	5 µg	12.5 µl

Notes:
- growth medium may be with or without FCS and antibiotics
- use transfection mixture within 60 minutes after preparation
- mix thoroughly at all mixing steps by pipetting the full volume up and down 5-10 times

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