A549: transfection of siRNA

Fig. 1: Knock-down of CREB gene expression in A549 lung adenocarcinoma cells transfected with Viromer® BLUE or Oligofectamine®

- Standard protocol (no optimization): 25nM siRNA
- Test with Optimem and DMEM + 5% FCS
- 4h post-transfection: change of medium for DMEM
- Read-out: 72h post-transfection (protein expression by WB)

>> Viromer gives the best answer (47% knock-down) with use of DMEM

Data from S. Wodischek, Dpt of Heart Surgery, Medicine University MLU-Halle (Germany)
A549: transfection of plasmid DNA

Fig. 2: Microscopic observation of GFP expression in A549 lung adenocarcinoma cells transfected with Viromer® RED

- standard protocol
- approx. **80% efficiency**, 24h post transfection
- good cell viability

Data from Dr L. Marcos-Villar, Dr A. Nieto’s group, Centro Nacional de Biotecnología / CNB-CSIC (Spain)
A549: transfection of plasmid DNA

• 47% efficiency 24h post transfection
• good cell viability

Data from Prof. Giehl, University of Gießen (Germany)
**Fig. 4: Comparative protein expression in A549 lung adenocarcinoma cells transfected with MIRUS® reagent and Viromer® RED at 3 different transfection scales**

- 6-well plate format
- Final DNA amount per well: 1, 2 and 3 µg
- Viromer>>Mirus: efficiency, cell viability, convenience of use

Data from Prof. LM Huang, Dpt of Pediatrics, National Taiwan University Hospital (Taiwan)
A549: transfection of plasmid DNA

- standard protocol, cells seeded at 75% confluency
- approx. 70% efficiency, 24h post transfection
- good cell viability

Fig. 5: Microscopic observations of GFP expression in A549 lung adenocarcinoma cells transfected with Viomer® ONE RED

Data from Dr L. Marcos-Villar, Dr A. Nieto’s group, Centro Nacional de Biotecnología / CNB-CSIC (Spain)
Fig. 6: Microscopic observations of GFP expression in A549 lung adenocarcinoma cells transfected with Viomer® ONE RED - Confocal microscopy

Data from Dr L. Marcos-Villar, Dr A. Nieto’s group, Centro Nacional de Biotecnología / CNB-CSIC (Spain)
A549: transfection of **plasmid DNA and mRNA**

Fig. 7: Optimization of pDNA and mRNA transfections in A549 lung adenocarcinoma cells transfected with Viromer® ONE RED

- Numbers in circle corresponds to % of positive cells 24h post-transfection of a GFP plasmid (3.5kb) or a GFP encoding mRNA (996nt)
- Cells seeded 1 day before at $5 \times 10^3$/96-well
- Test of 6 different rehydration volumes of the Viromer® vials (standard protocol: 80µl) to vary the Viromer-pDNA or –mRNA ratio,
- And 3 different transfer volumes (standard protocol: 10µl/96-well) to vary the amount of transfection complex arriving onto the cells

In-house data Lipocalyx GmbH