Metafectene SM10 Technical Note

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Transfection of SM10 cells (mouse placenta (labyrinthine trophoblast) cell line)

SM10 cells were cultured in 60mm dishes at 37°C, 5%CO_2 in RPMI 1640 containing 10% FBS with antibiotics. For transfection, SM10 cells were plated at 3 x 10^5 in a 60mm dish in RPMI 1640 containing 10% FBS with antibiotics. Twenty four hours later the media was changed and 2.5 ml of fresh, serum containing media was added. SM10 cells (50% confluency) were transfected for 24 hr with pc3DNA-Lac Z using either Metafectene or Lipid T at the optimal lipid:DNA ratio of 12µl:3µg and then washed and fixed for Lac Z staining. To transfect, Mectafectene or Lipid T was added to 100µl of serum free RPMI and incubated for 5 min at RT [TUBE A]. In a separate tube, the DNA was added to 100ul of serum free RPMI and incubated for 5 min at RT [TUBE B]. The contents of TUBE B was added to TUBE A, dropwise, and then mixed by pipetting up and down and incubated for 20 min at RT. The transfection solution was added dropwise to cells and mixed by swirling the plate.

Conclusion: Mectafectene was far more effective than Lipid T in transfecting SM10 mouse trophoblast cells (Table 1). Transfection efficiency in SM10 cells using Metafectene is routinely 10-15% compared to <1% for Lipid T.

Table 1

Metafectene	Lipid T