



Transfection Max Medium (TMM)

Catalog #9051

100mL

Product Description

Transfection Max Medium (TMM) is a serum-free, modified MEM-based formulation developed specifically to maximize transfection efficiency while maintaining normal cell physiology. Its defined composition provides a controlled environment that minimizes variability associated with serum, ensuring more consistent results and higher reproducibility across experiments. TMM supports both adherent and suspension mammalian cell lines, including HEK293T, CHO, and primary fibroblasts, and can be used under serum-free or reduced-serum conditions as needed. By eliminating serum interference, TMM improves DNA–lipid complex formation, enhances uptake of transfection reagents, and reduces cytotoxic effects, leading to stronger expression signals and more reliable results. It is bicarbonate-buffered and maintains a stable physiological pH (7.2) under standard CO₂ incubation.

Product Use

TMM is for research use only. It is not approved for human or animal use, or for application *in vitro* diagnostic procedures.

Storage

Store the medium at 4°C. Protect from light.

Shipping

Room temperature.

Caution: If handled improperly, some components of the medium may present a health hazard. Take appropriate precautions when handling it, including the wearing of protective clothing and eyewear. Dispose of properly.

Performance Data

HEK293T cells were transfected with a GFP reporter plasmid under serum-free conditions to evaluate transfection performance in Transfection Max Medium (TMM) (Figure 1).

Experimental Workflow

1. **Cell seeding:** Cells were plated 24 hours prior to transfection to achieve 70–90% confluence.
2. **Complex formation:** DNA–lipid complexes were prepared in TMM using a transfection reagent of the user's choice, following the manufacturer's instructions.
3. **Transfection step:** Complexes were added directly to the cells, followed by incubation under standard conditions (37°C, 5% CO₂).

The following approaches represent possible transfection strategies and may be selected based on cell type and experimental needs:

- **Full-medium use:** Cells are maintained entirely in TMM during both complex formation and incubation. This option provides a fully serum-free environment and may enhance complex stability, uptake, and expression efficiency.
- **Reduced-serum full-medium use:** Cells are maintained in TMM supplemented with reduced serum (e.g., 2–5% FBS) during the transfection period. This approach supports more serum-dependent or sensitive cell types while still avoiding regular growth medium.
- **Partial-medium use:** Complexes are prepared in TMM and added to cells maintained in their standard culture medium (e.g., DMEM + 2% FBS). This strategy offers flexibility for cells that tolerate only moderate serum reduction.

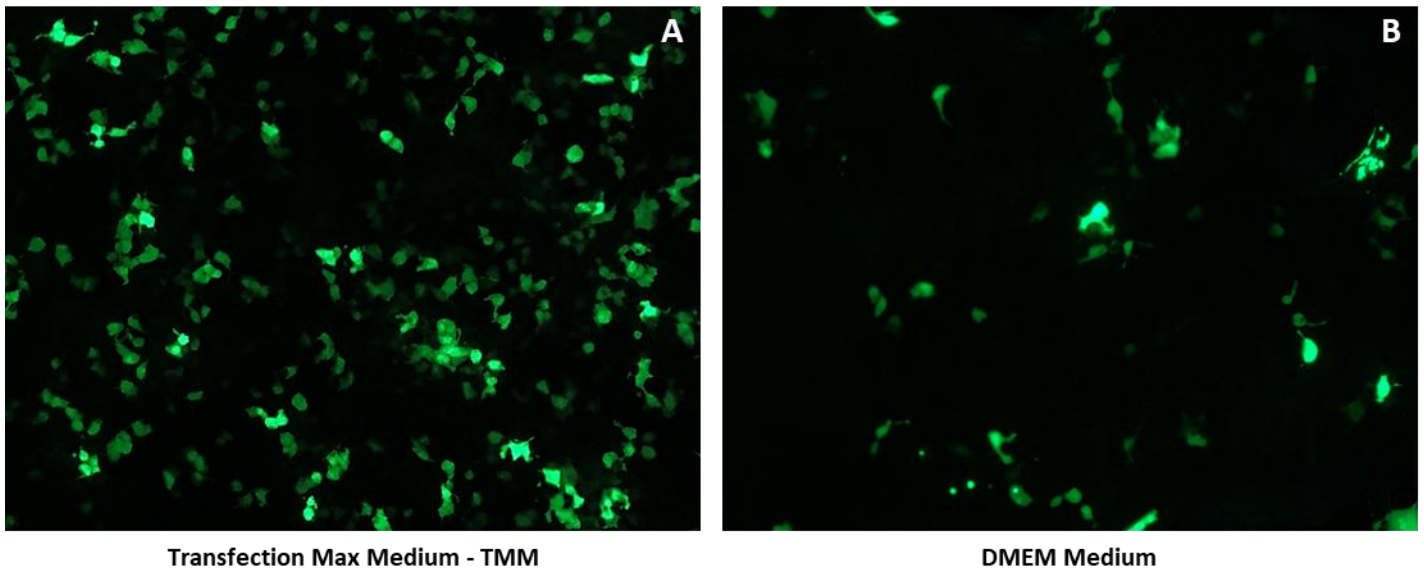


Figure 1. Representative fluorescence microscopy images of HEK293T cells transfected with a GFP reporter plasmid. **(A)** Cells maintained in Transfection Max Medium (TMM). **(B)** Cells maintained in serum-free DMEM. Enhanced GFP signal intensity and healthier cell morphology were observed in TMM, demonstrating its superior support for lipid-based transfection assays.