Vero Cell Propagation Medium

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Protocol ID: BUF-VERO-PROP-001
Version: v1.1
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Purpose

This medium is used for routine propagation of Vero cells for LCMV focus-forming assays and other virological applications.

Components (Final volume: 500 mL)

Component	Amount	Final concentration / note
DMEM (high glucose, with L-glutamine, phenol red)	to 500 mL	Base medium
Heat-inactivated FCS/FBS	50 mL	10% (v/v)
Penicillin–Streptomycin (100×; 10,000 U/mL penicillin, 10,000 µg/mL strep)	5 mL	1× final
2-mercaptoethanol (100× stock; see lab stock sheet for concentration)	0.5 mL	1× final (typical 50–100 µM range)

> ⚠ Warning
>
> For Vero cell culture, always use **DMEM-based medium**. Do **not** confuse this with RPMI-based media used elsewhere in the plaque/FFA protocol (e.g. for sample dilution).

Preparation

1. In a sterile biosafety cabinet, add ~400 mL of DMEM to a sterile 500 mL bottle.

2. Add:

- 50 mL heat-inactivated FCS/FBS.
- 5 mL Penicillin–Streptomycin (100× stock) to achieve 1× final.
- 0.5 mL of the 100× 2-mercaptoethanol stock (check your lab stock sheet for the exact stock concentration and resulting final µM).

3. Top up with DMEM to a final volume of **500 mL**.
4. Mix gently by inversion.
5. If any component was added from a non-sterile container, sterile-filter the complete medium (0.22 µm filter) into a fresh sterile bottle.
6. Label with:
   - "Vero propagation medium (DMEM + 10% FCS + 1× P/S + 2-ME)"
   - Date of preparation
   - Initials
7. Store at **4°C** for up to **4 weeks**, protected from light.

Use

- Warm medium to **37°C** before use with cells.
- Discard medium if there is any sign of contamination (turbidity, threads, pH shift) or if it is past the defined expiry (4 weeks from preparation).

Version history

Version	Date	Author	Changes
v1.0	2025-12-01	Dillon Corvino	Initial Quarto buffer document (MEM-based formulation).
v1.1	2025-12-02	Dillon Corvino	Updated to DMEM + 10% FCS + 1× P/S + 2-ME, aligned with lab protocol.