

Ebola Pseudoviral Particles – Zaire Ebolavirus (Makona 2014 Strain)

CATALOG NUMBER: PsLv-EBOV-M2014

Description

Ebola virus enters host cells via its surface glycoprotein (GP), which binds to specific receptors on the cell membrane and facilitates membrane fusion.

eEnzyme's PsLv-EBOV-M2014 pseudoviral particles are replication-deficient lentiviruses pseudotyped with the GP from Sudan ebolavirus, strain H.sapiens-wt/GIN2014/Makona-Coyah-955 (GenBank Accession No. AKG65250). These particles encode firefly luciferase (FLuc) as a reporter, enabling quantification of viral entry through luminescence. This system isolates the entry step from the rest of the viral life cycle, making it ideal for targeted assays.

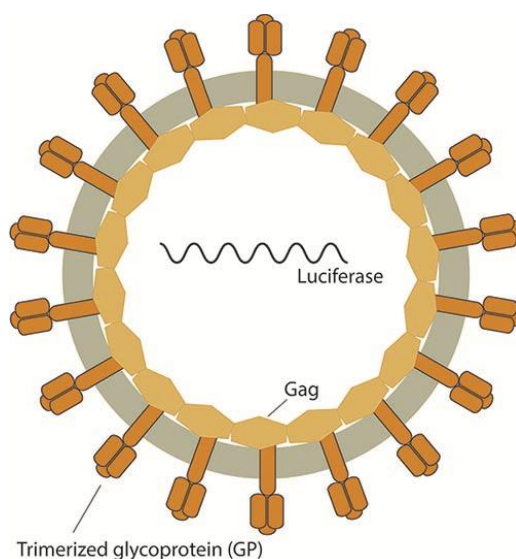


Figure 1. Illustration of the replication-deficient lentivirus pseudotyped with Ebola glycoproteins

Applications

Optimized for use with eEnzyme's Firefly Luciferase Assay Kit (Catalog # CA-L165), these pseudoviruses are ideal for:

- Screening inhibitors of Ebola virus entry and GP-mediated fusion
- Evaluating neutralizing antibodies against Zaire ebolavirus
- High-throughput infection assays in 96-, 384-, and 1536-well formats

Key Features

- **Robust Signal:** High signal-to-noise ratio for sensitive detection
- **HTS-Compatible:** Validated for multi-well formats
- **Convenient Format:** Ready-to-use for luciferase-based entry assays

Product Contents

- Volume: 1 mL or 5 mL per vial
- Format: Lentivirus-based pseudoviral particles
- Titer: $>1.0 \times 10^7$ particles/mL

Storage & Stability:

- Store immediately at -70°C upon receipt



- Thaw rapidly at room temperature (<30 min, no shaking); use immediately
- Do not aliquot or refreeze
- Shelf life: 6 months from shipping date when stored at -70°C

Assay Protocol

Cell Infection

1. Seed HEK293 cells:
 - 96-well: 20K cells/well in 50 μ L DMEM + 10% HyClone™ FetalClone™ II Serum (no antibiotics)
 - 384-well: 5K cells/well in 15 μ L
2. Incubate overnight for adherence
3. Replace media and add pseudoviral particles:
 - 96-well: 50 μ L/well
 - 384-well: 12.5 μ L/well
 - Centrifuge at 700 rpm for 15 min at 4°C
4. Incubate for 2 hrs at 37°C
5. Add fresh DMEM + 10% serum (same volume as above)
6. Incubate for 48-72 hrs at 37°C

Luciferase Readout

1. Without removing supernatant, add luciferase assay working solution:
 - 96-well: 100 μ L/well
 - 384-well: 25 μ L/well
 - Use eEnzyme's Firefly Luciferase Assay Kit (Catalog # CA-L165)
2. Measure luminescence using a microplate reader (e.g., BioTek Synergy 2, gain 255)

Representative Data

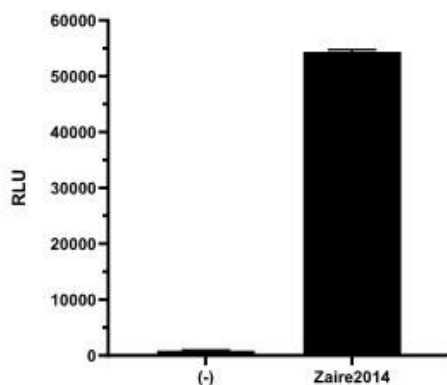


Figure 2: Assay: HEK293 cells infected with PsLv-EBOV-M2014 pseudovirus

Readout: Relative Luminescence Units (RLU)

(-): Negative control using lentivirus without envelope protein

Zaire2014: Ebola GP pseudovirus (PsLv-EBOV-M2014)

