Lentivirus Stabilizer

How to increase lentivirus stability? Lentivirus tends to lose infectivity with time even stored at -80°C. Lentivirus Stabilizer was developed to preserve the infectivity of lentivirus in storage. When stored in the regular production media, DMEM, after 6 month of storage at -80°C, most of the infectivity will be lost. In contrast, when stored in the Lenti Stabilizer, the infectivity is well preserved.

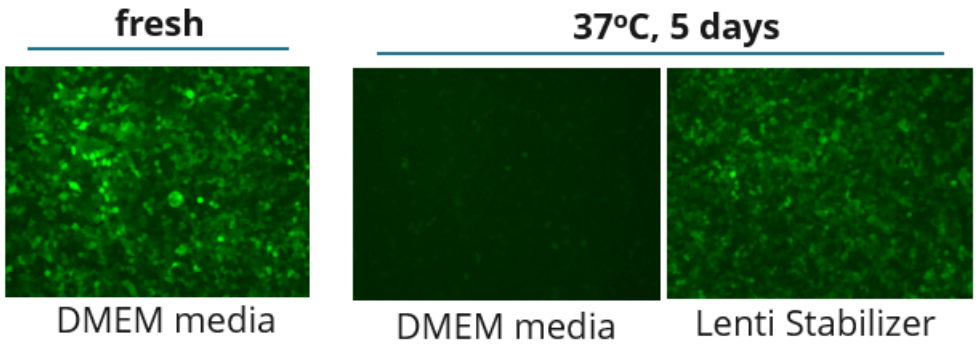
Features:

- Stabilize lentivirus in storage
- Prolong storage time to 1 year
- Protect from freeze & thaw when used together with lenti concentrator

Content & Storage:

Component	Volume	Shipping	Storage
Lentivirus Stabilizer	5 mL (cat# TR30039) 20mL (cat# TR30039L)	Room temp	4°C

Lentivirus Stabilizer well preserved the infectivity in storage.



Lenti-GFP particles (cat# PS100071V) freshly made (left panel).
Viral particles were concentrated with lenti concentrator (cat# TR30025) to change buffer from DMEM to the lenti stabilizer. The viruses were incubated at 37°C for 5 days (equivalent to -80°C for 1 year). 10 moi of the above lentiviruses were used to transduce HEK293T cells. Fluorescent images were taken 48 hrs post transduction.

Protocol, Concentrate using Lenti Concentrator, then re-suspend in Lenti Stabilizer

1. **Harvest lentiviral supernatant**: Use Lenti packaging kit (cat# TR30037) to make lentiviral particles. Collect the lentiviral supernatant, centrifuge at 500g for 10 min, then filter through 0.45 µm filter to remove any cell debris.

   Note: a. Peak lentivirus production is 48 hours post transfection.
   b. Use polyethersulfone (PES) low protein-binding filter. Do not use nitrocellulose filter as it binds lentivirus.

2. **Mix lentiviral supernatants with lenti concentration solution**: Transfer the lentiviral supernatants to 15 mL or 50 mL sterile conical centrifuge tubes depending on the volume; add 1 volume of cold Lenti Concentration Solution to every 4 volumes of lentiviral supernatant. Mix by gentle inversion.

Note: 1) Open the Lenti Concentrator inside the hood.
2) The volume of Lenti Concentrator to be added is the volume of lentiviral supernatant divided by 4, i.e. 2 mL Lentivirus concentrator to 8 mL lentiviral supernatants.

3. **Incubation at 4°C or on ice**: Incubate the mixture at 4°C or on ice for 1.5 hrs to overnight.

   Note: a. Longer incubation may increase the recovery rate.
   b. The lentiviral particles in lenti concentrator are stable for at least one week at 4°C.

4. **Centrifugation**: Centrifuge at 3,500g for 25 min at 4°C, remove the supernatant carefully.

   Note: The lentiviral particles appear as white pellet at the bottom of the tube. Do not disturb the white pellet.

5. **Re-centrifuge** at 3,500g for 5 min at 4°C, remove the trace supernatant carefully.

6. **Re-suspend** the virus in cold, sterile Lentivirus Stabilizer at 1/100 of the original sample volume by gently pipetting up and down or a higher volume if less concentrated virus is needed.

7. **Aliquot and store** at -80°C.

For Research Use Only, Not for use in diagnostic procedures.