

Biosafety Level of GeneCopoeia HIV-Based Lentiviral Expression System

-Lentifect™ lentiviral particles and Lenti-Pac™ lentiviral packaging reagents

Lentiviral vectors used for gene transfer are replication-defective and self-inactivated in transduced cells. Multiple packaging plasmids are needed for packaging replication-defective lentiviral particles and the change to recombination to form complete replicable competent lentivirus (RCL) is minimal.

GeneCopoeia offers both Lentifect™ lentiviral particles and Lenti-Pac™ lentiviral packaging reagents. The GeneCopoeia HIV-based lentiviral expression system meets Biosafety Level 2 (BSL-2) requirements based on the criteria published by the Centers for Disease Control and Prevention. This system is a modified version of the third generation of the self-inactivating (SIN) lentiviral vector system, which incorporates enhanced biosafety features. The lentiviral transfer vector is responsible for transduction and stable integration into the genome of the host cell, but lacks the elements essential for transcription and packaging lentiviral particles by itself. Thus, it is self-inactivated, meaning that no unwanted viral replication and production will happen after the first transfection. Nevertheless, the guidelines for working with BSL-2 safety category materials must be adhered to. For more information regarding BSL-2, please visit the CDC website.