

EMERGENCY TELEPHONES: 301-251-6638 or 1-800-485-5808

Cultures of replication-defective lentiviral vectors are non-infectious and are not hazardous materials as defined by OSHA 1919.1200. However, these materials are produced in cells where there is a possibility of recombination to form wild-type HIV-1 virus. As such, they should be handled as potentially infectious material.

Description

Lentiviral vectors defined by the presence of HIV-derived *cis* elements and recombinant transgene sequences (e.g. marker or human transgenes) which are flanked by lentiviral long terminal repeats (LTRs). The removal of the viral structural genes renders the vector replication-defective and dependent upon a helper vector(s) or packaging cell line. Lentiviruses are enveloped viruses and upon leaving the producer cell line, the viral capsid becomes enclosed in a lipid bilayer derived from the host cell. Lentiviral vectors are self-inactivating (SIN), thus restricting mRNA production from integrating vectors to the internal promoter, severely reducing full-length vector transcripts. By default, the lentiviral vectors are pseudotyped with the VSV-G Indiana envelope serotype; however, the envelope protein can be customized as desired.

Lentiviral cultures are normally provided as purified viral particles in phosphate buffered saline (PBS) at a concentration of up to 1×10^9 IFU/ml. Trace components present include, but are not limited to, inorganic salts, vitamins and other nutrients, and human cellular proteins, carbohydrates, amino acids, and fats. The material is normally shipped and stored frozen.

SECTION I

Hazardous Ingredients

None

SECTION II

Physical Data

Liquid or frozen particle suspensions

SECTION III

Health Hazards

Replication-deficient lentiviral cultures are not known to cause any diseases in humans or animals. However, lentiviruses can integrate into the host cell genome and thus pose some risk of insertional mutagenesis.

SECTION IV

Fire and Explosion

None

SECTION V

Stability and Reactivity

Not chemically reactive. Will enter permissive mammalian cells and interact with cellular components.

SECTION VI

Method of Disposal

Spill: Contain spill and decontaminate the area using a disinfectant such as chlorine bleach (10% f.c.), Wescodyne, or detergent-based disinfectant.

Waste Disposal: Dispose of viral stock by autoclaving at 121°C for 30-45 minutes
Dispose of infected liquid cultures by decontamination with chlorine bleach (10% f.c.) for 10 minutes and then dispose of in sink.
Dispose of infected animal carcasses or tissues by incineration

Follow all Federal, State, and Local regulations.

SECTION VII

Special Protective Information

Handle as biohazardous material under biosafety level (BSL)-2 containment

SECTION VIII

Special Precautions or Comments

Vigene Biosciences, Inc. recommends that all lentiviral vectors and cultures be handled by qualified biologists using appropriate safety procedures and precautions. Upon accidental exposure to lentiviral vectors, seroconversion towards HIV-1 viral proteins could result and health provider should be contact.

Detailed discussions of laboratory safety procedures are provided in **Laboratory Safety: Principles and Practice** (Fleming et al., ASM Press, 2009), and in the U.S. Government Publication, **Biosafety in Microbiological and Biomedical Laboratories** (CDC, 2009). This and other publications are available at the Centers for Disease Control Office of Health and Safety's website at <https://www.cdc.gov/biosafety/publications/index.htm>

Information on the classification of human etiologic agents on the basis of hazard can be found as Appendix B in the NIH **Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules** at https://osp.od.nih.gov/wp-content/uploads/2013/06/NIH_Guidelines.pdf

The above information is accurate to the best of our knowledge. All materials and mixtures may present unknown hazards and should be used with caution. The user should exercise independent judgment as to the hazards based on all sources of information available. Vigene Biosciences, Inc. shall not be held liable for any damage resulting from the handling or use of the above product.

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