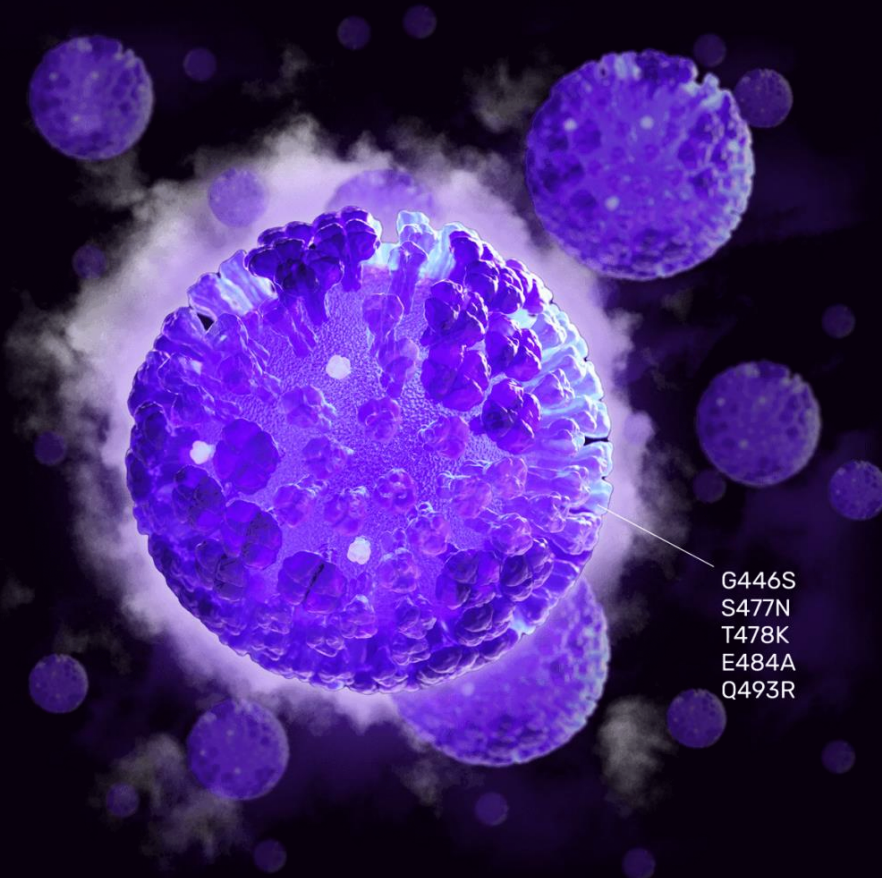


PSEUDOVIRUSES

Material Safety Data Sheet (MSDS)



G446S
S477N
T478K
E484A
Q493R

SECTION 1 - IDENTIFICATION

Company	IVANO Bioscience PLT-0596, 1065 Av. de la Médecine, Québec, QC G1V 0A6, CANADA. 581-986-2808 info@ivanobioscience.com
Emergency phone (Chemtrec)	<u>US and Canada: 1-800-424-9300</u> 1-703-527-3887 <u>Outside US and Canada: 1-703-741-5970</u>
Recommended use	Research use only

SECTION 2 - DESCRIPTION

This MSDS is applicable to all (premade and custom-made) pseudovirus products manufactured and supplied by IVANO Bioscience. Those pseudoviruses are lentiviral vectors defined by the presence of HIV-derived cis elements 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. The lentiviral vectors are pseudotyped with a custom envelope protein to mimic another virus surface.

Pseudoviruses are normally provided as concentrated viral particles in phosphate buffered saline (PBS). 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 3 - HEALTH HAZARD

Lentiviral vectors are replication-defective, therefore do not possess danger to humans or animals. However, lentiviral vectors can integrate into the host chromatin, and thus pose some risk of insertional mutagenesis.

Biohazard Classification: Biohazard of Biosafety level 2 (BSL-2)

SECTION 4 - PHYSICAL DATA

Liquid or frozen particle suspension

SECTION 5 - FIRE AND EXPLSION

None

SECTION 6 - REACTIVITY

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

SECTION 7 - RECOMMENDED PRECAUTIONS CONTAINMENT REQUIREMENTS

IVANO Bioscience recommends that all lentiviral vectors and cultures be handled by qualified biologists using appropriate safety procedures and precautions. Appropriate containment facilities for all activities involving the vector and vector-administered cells, tissues and fluids. This includes BSL2 practices (including animal housing). For information on BSL-2 handling, see Biosafety in Microbiological and Biomedical Laboratories (BMBL) 5th Edition.

PROTECTIVE CLOTHING: Laboratory coat, gloves, mask, safety glasses recommended.

SECTION 8 - 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 and allow sufficient contact time (30 min) before cleaning up disposal (Decontaminate all wastes before disposal).

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 9 - STORAGE

In sealed containers that are appropriately labeled. Long-term storage at - 80°C. Avoid Thaw/freeze cycle.

The above information is accurate to the best of our knowledge and experience. The user should exercise independent judgment as to the hazards based on all sources of information available. IVANO Bioscience shall not be held liable for any damage resulting from the handling or use of the above products.