



PATHOGEN SAFETY DATASHEET

EPSTEIN-BARR VIRUS

DESCRIPTION

Epstein-Barr virus belongs to genus lymphocryptovirus of the subfamily Gammaherpesvirinae in the Herpesviridae family. It consists of a double-stranded 172 Kb DNA genome, enclosed within an icosahedral capsid, surrounded by a phospholipid rich envelope. Epstein-Barr virus can be cultured in lymphoblastoid cell lines. The virus can infect B-cells and epithelial cells. *Synonyms:* Human herpesvirus 4 (HHV4); EBV, infectious mononucleosis (IM), glandular fever, Burkitt's lymphoma (BL).

HOST RANGE: Humans

SUSCEPTIBILITY TO DISINFECTANTS: Most herpes viruses are susceptible to 30% ethanol and 20% isopropanol, 200 ppm sodium hypochlorite, 0.12 % orthophenyl phenol, and 0.04% glutaraldehyde..

PHYSICAL INACTIVATION: Herpes viruses can be inactivated by heating in solution at 60°C to 80°C, by freeze drying, and heating at 100°C for 30 minutes.

RISK GROUP CLASSIFICATION: Risk group 2

CONTAINMENT REQUIREMENTS: Containment Level 2 facilities, equipment, and operational practices for work involving infectious or potentially infectious materials, animals, or cultures.

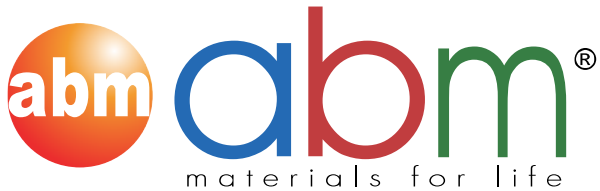
PROTECTIVE CLOTHING: Wear lab coat and gloves. Eye protection must be used where there is a known or potential risk of exposure to splashes.

LABORATORY HAZARDS

LABORATORY-ACQUIRED INFECTIONS: Low risk of laboratory acquired infection. No reports of laboratory acquired infection were found in the literature.

PRIMARY HAZARDS: Ingestion, accidental parenteral inoculation, direct exposure of mucous membranes of the eyes, nose, or mouth, or inhalation of aerosolized materials are risks associated with herpes viruses.

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OTHER PRECAUTIONS: All procedures that may produce aerosols, or involve high concentrations or large volumes should be conducted in a biological safety cabinet (BSC). The use of needles, syringes, and other sharp objects should be strictly limited. Additional precautions should be considered with work involving animals or large scale activities.

HANDLING AND STORAGE

SPILLS: Allow aerosols to settle, then, wearing protective clothing, gently cover the spill with absorbent paper towel and apply an appropriate disinfectant, starting at the perimeter and working towards the center. Allow sufficient contact time before starting the clean up.

DISPOSAL: All wastes should be decontaminated before disposal either by steam sterilization, incineration or chemical disinfection.

STORAGE: The infectious agent should be stored in a sealed and identified container.

REGULATORY AND OTHER INFORMATION

REGULATORY INFORMATION: The import, transport, and use of pathogens in Canada is regulated under many regulatory bodies, including the Public Health Agency of Canada, Health Canada, Canadian Food Inspection Agency, Environment Canada, and Transport Canada. Users are responsible for ensuring they are compliant with all relevant acts, regulations, guidelines, and standards.

References

- *Public Health Agency of Canada. (2004). In Best M., Graham M. L., Leitner R., Ouellette M. and Ugwu K. (Eds.), Laboratory Biosafety Guidelines (3rd ed.). Canada: Public Health Agency of Canada.*
- *Viral agents: Human herpes virus. (1999). In J. Y. Richmond, & R. W. McKinney (Eds.), Biosafety in microbiological and biomedical laboratories (BMBL) (4th ed., pp. 161). Washington, D.C.: CDC & NIH.*
- *Human Pathogens and Toxins Act. S.C. 2009, c. 24. Government of Canada, Second Session, Fortieth Parliament, 57-58 Elizabeth II, 2009, (2009).*

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