



VIRAL VECTOR  
PRODUCTION  
UNIT



# MATERIAL SAFETY DATA SHEET

## (Adenovirus Type 5)

### SECTION I - PRODUCT IDENTIFICATION

- **PRODUCT:** All Adenovirus type-5 vectors made by Vector Production Unit (UPV).
- **NAME:** Recombinant adenovirus vector type 5.
- **SYNONYM OR CROSS REFERENCE:** Ad5 vector, rAd5.
- **RISK GROUP CLASSIFICATION:** Biosafety Level 2. If the vector transgene encodes for a potentially toxic or tumorigenic gene, then this MSDS is not applicable.
- **CHARACTERISTICS:** Adenoviridae family, non-enveloped double-stranded DNA virus linear DNA genome. The recombinant Ad5 vectors are based on human adenoviral type 5 backbone, which is deleted in the E1 and/or E3 regions. Replication-defective vector, except in permissive cell lines such as HEK293 cells.
- **PROVIDED:** The vector is provided as liquid or frozen particle suspensions.
- **DESCRIPTION:** Recombinant Ad5 vectors are produced at the UPV by homologous recombination and transfection in permissive human HEK293 cells. To remove empty capsids, at UPV Ad5 vectors are purified by Cesium Chloride ultracentrifugation, followed by size-exclusion chromatography.
- **QUALITY CONTROL ASSAYS:** Titer in physical particles is determined by absorbance (260 nm). Titer in infectious particles is determined by measuring hexon protein in infected HEK293 cells using the AdEasy® Viral Titer Kit (cat#972500, Agilent Technologies). All vector produced must pass sterility tests to confirm absence of mycoplasma, bacteria, fungi and yeast.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

### SECTION II - HEALTH HAZARDS

Handle as biohazardous material under Biosafety Level 2 containment.

- **HAZARDOUS INGREDIENTS:** None.
- **CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:** None.
- **FIRE AND EXPLOSION:** None.
- **PATHOGENICITY:** Wide clinical manifestation and severity, including cough, conjunctivitis, pharyngitis, rhinitis and fever. Incubation Period: 1 to 10 days.

### SECTION III - SPECIAL PRECAUTIONS

The Vector Production Unit (UPV) recommends that all Ad5 vectors and cultures be handled by qualified biologists using appropriate safety procedures and precautions.

Adenovirus does not integrate into the host cell genome but can produce a strong immune response.

- **STORAGE:** In sealed containers that are appropriately labeled. Long-term storage at -80°C.
- **CONTAINMENT REQUIREMENTS:** Appropriate containment facilities for all activities involving the vector and vector-administered cells, tissues and fluids. This includes BSL-2 practices for vector use (including animal housing).
- **PROTECTIVE CLOTHING:** Laboratory coat, gloves and closed toed shoes. Safety glasses recommended.
- **TRANSPORT INFORMATION:** Not classified as dangerous in the meaning of transport regulations.

### SECTION IV - FIRST AID/TREATMENT

- **CONTACT:** Immediately flush eyes and skin with plenty of water for at least 15 minutes. Call a physician.
- **INGESTION:** Wash out mouth with water. Call a physician.
- **ACCIDENTAL INJECTION:** Wash area with soap and water. Call a physician.
- **ADVICE TO PHYSICIAN:** No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

### SECTION V - METHOD OF DISPOSAL

- **SPILL:** Contain spill and decontaminate the area using a disinfectant such as chlorine bleach (10% f.c.), allow sufficient contact time (30 min) before clean up.
- **WASTE DISPOSAL:**
  - Dispose of viral stock by autoclaving at 121°C for 15 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.
  - Dispose of in accordance with local regulations.

### SECTION VI - MISCELLANEOUS INFORMATION

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 Vector Production Unit (UPV) assumes no liability resulting from the handling or use of the above product.