

Recombinant Adenovirus Type 5 Particles, CMV-Luciferase

Cat. No. ADE-009 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

This product is a concentrated source of highly-purified Adenovirus type 5 particles from a lysate of optimally-infected 293 cells. Following double CsCl gradient purification with DNase treatment and dialysis, this Ad5 preparation is of very high quality and minimal lot-to-lot variation.

Background

Adenoviruses are medium-sized (80–100 nm), non-enveloped viruses. They have an icosahedral nucleocapsid containing a linear, double-stranded DNA genome of approximately 36 kb (Nermut, 1984). The viral genome is grouped into different transcriptional units, designated early (E1, E2, E3, E4), intermediate, and late. The E1 gene is essential for activation of other viral genes and for viral replication. Deletion of the E1 gene results in viruses that are replication incompetent in normal cells. However, replication-competent viral particles can be produced from E1-deleted viral vectors by providing the E1 gene in trans. The E3 gene is nonessential for either viral replication or infection (Flint, 1999).

Adenovirus type 5 is one of the most extensively studied and well-characterised adenoviruses, and is the type used most frequently in generating recombinant adenoviruses for gene therapy. These vectors generally contain deletions of the E1 and E3 genes, which allows for insertion and packaging of up to 7.5 kb of foreign DNA, for gene delivery.

This recombinant human adenovirus type 5 expresses luciferase protein under the control of a CMV promoter. Luciferases are naturally occurring protein enzymes that catalyze emission of light from a substrate (luminescence). Light is produced as a by-product of a reaction in which a luciferase enzyme converts a substrate to a product. Luciferase imaging with this vector can therefore be used to monitor virus trafficking,

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	optimise virus transduction efficiency and determine viral infection conditions in specific cell types.
Purity	Purified virus, double CsCl gradient purification with DNase treatment and dialysis.
Formulation	PBS.50 mM Hepes pH 7.8,10% Glycerol
Freezing	Can be frozen, but avoid multiple freeze/thaw cycles.
Storage	Store frozen at less than -20 centigrade, preferably -80 centigrade.
Notes	This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.
Type	Recombinant
ClassID 1	Infectious Disease
GENE INFORMATION	
Synonyms	Adenovirus Type 5 Particles