Cre Recombinant Adenovirus

CATALOG NUMBER: ADV-005

STORAGE: -80°C

QUANTITY AND CONCENTRATION: 50 µl, 1 x 10^{11} VP/mL in TBS containing 10% Glycerol

Background
Recombinant adenoviruses have tremendous potential in both research and therapeutic applications. There are numerous advantages in using an adenovirus to introduce genetic material into host cells. The permissive host cell range is very wide. The virus has been used to infect many mammalian cell types (both replicative and non-replicative) for high expression of the recombinant protein. Recombinant adenoviruses are especially useful for gene transfer and protein expression in cell lines that have low transfection efficiency with liposome. After entering cells, the virus remains epichromosomal (i.e. does not integrate into the host chromosome so does not activate or inactivate host genes). Recently, recombinant adenoviruses have been used to deliver RNAi into cells.

The integrase family of DNA recombinases includes over sixty members identified by sequence similarity. Cre is a bacteriophage P1 member of the integrase family, catalyzing site-specific recombination between two 34-base pair lox DNA sequences. In vivo, Cre recombinase is utilized to maintain the P1 genome in a lysogenic state. The Cre-lox system has been extensively employed in in vivo and in vitro genetic engineering applications in a variety of organisms. The provided recombinant adenovirus contains Cre recombinase.

Safety Consideration
Remember that you will be working with samples containing infectious virus. Follow the recommended NIH guidelines for all materials containing BSL-2 organisms. Always wear gloves, use filtered tips and work under a biosafety hood.

Methods
The appropriate amount of viruses used for infecting cells is critical for the outcome of your experiments. If not enough virus is used, it will not give 100% of infection. If too much virus is used, it will cause cytotoxicity or other undesired effects. The amount of adenovirus cell surface receptors vary greatly among different cell types therefore the optimal concentration differs dramatically between cell types. A range of 10-200 MOI (multiplicity of infection) is used for most cell lines, but up to 1000 MOI may be used for lymphoid cell lines.

Traditionally, Infectivity particles are measured in culture by a plaque-forming unit assay (PFU) that scores the number of viral plaques as a function of dilution. In contrast to the 10-day infection of a classical plaque assay, Cell Biolabs’ QuickTiter™ Adenovirus Titer Immunoassay Kit (Cat. #VPK-109) only requires 2-day infection, and there is no agar overlay step. The kit antibody against hexon protein recognizes all serotypes of adenovirus by immunocytochemistry (see Flow Chart).
References


Recent Product Citations


License Information

This product is covered by US Patent 6,120,764 and is sold under license from AdVec, Inc. This licensed product is intended for ACADEMIC, GOVERNMENT AND NON-PROFIT RESEARCH USE ONLY; not for use in diagnostic or therapeutic procedures. The product may not be transferred, sold, or otherwise
provided to another laboratory except by an authorized distributor of Cell Biolabs, Inc. Use of this product by Biotechnology and Pharmaceutical companies requires a license for all fields of use including research. Please contact:

    Director of Business Development
    Cell Biolabs, Inc.
    busdev@cellbiolabs.com

**Warranty**
These products are warranted to perform as described in their labeling and in Cell Biolabs literature when used in accordance with their instructions. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THIS EXPRESSED WARRANTY AND CELL BIOLABS DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR PARTICULAR PURPOSE. CELL BIOLABS’s sole obligation and purchaser’s exclusive remedy for breach of this warranty shall be, at the option of CELL BIOLABS, to repair or replace the products. In no event shall CELL BIOLABS be liable for any proximate, incidental or consequential damages in connection with the products.

**Contact Information**
Cell Biolabs, Inc.
7758 Arjons Drive
San Diego, CA 92126
Worldwide: +1 858-271-6500
USA Toll-Free: 1-888-CBL-0505
E-mail: tech@cellbiolabs.com
www.cellbiolabs.com

©2004-2019: Cell Biolabs, Inc. - All rights reserved. No part of these works may be reproduced in any form without permissions in writing.