Claims

1. An adenovirus vector comprising a capsid, wherein said capsid comprises one or more capsid proteins from wildtype chimpanzee adenovirus AdY25 and encapsidates a nucleic acid molecule comprising an exogeneous nucleotide sequence of interest operably linked to expression control sequences which direct the translation, transcription and/or expression thereof in an animal cell and an adenoviral packaging signal sequence, wherein the nucleotide sequence that encodes the wildtype chimpanzee adenovirus AdY25 is SEQ ID NO: 1.

2. The vector of claim 1, wherein said vector lacks a functional E1 locus.

3. The vector of claim 1 or claim 2, wherein said vector lacks an E3 locus.

4. The vector of any of claims 1 to 3 wherein the vector comprises at least one heterologous E4 open reading frame from another adenoviral serotype.

5. The vector of claim 4 wherein the vector lacks the native E4 locus and comprises an heterologous E4 locus or an open reading frame thereof from another adenoviral serotype.

6. The vector of claim 5 wherein the vector lacks the native E4 locus and comprises the E4Orf6 coding region from AdHu5.

7. The vector of claim 4 wherein the E4 locus comprises the native E4Orf1, E4Orf2 and E4Orf3 coding regions and the heterologous E4Orf4, Orf6 and Orf6/7 coding regions from AdHu5.

8. The vector of any of claims 1 to 7 wherein the exogeneous nucleotide sequence of interest encodes a protein or polypeptide.

9. The vector of claim 8 wherein said protein or polypeptide is selected from the group comprising an antigen, a molecular adjuvant, an immunostimulatory protein or a recombinase.

10. The vector of any of claims 1 to 9 wherein said exogeneous nucleotide sequence of interest is an miRNA or immunostimulatory RNA sequence.

11. The vector of any of claims 1 to 9 wherein said capsid comprises one or more capsid proteins selected from the group consisting of:

(a) an AdY25 hexon protein comprising the amino acid sequence of SEQ ID NO. 2;

(b) an AdY25 penton protein comprising the amino acid sequence of SEQ ID NO. 3; and

(c) an AdY25 fibre protein comprising the amino acid sequence of SEQ ID NO. 4.

12. An immunogenic composition comprising the adenovirus vector according to any of claims 1 to 11 and optionally one or more additional active ingredients, a pharmaceutically acceptable carrier, diluent, excipient or adjuvant.

13. The immunogenic composition of claim 12 for use in medicine.

14. The use of the immunogenic composition of claim 12 in the manufacture of a medicament for use in medicine.

15. The immunogenic composition of claim 13 or use of claim 14 wherein said use comprises delivering a transgene into a host cell.

16. The immunogenic composition of claim 13 or use of claim 14 wherein said use comprises eliciting an immune response in an animal.

17. The immunogenic composition of claim 13 or use of claim 14 wherein said use comprises boosting an immune response in an animal.

18. The immunogenic composition of claim 13 or use of claim 14 wherein said use comprises treating or preventing at least one disease.

19. The immunogenic composition of claim 13 or use of claim 14 wherein said use comprises inducing an immune response in an animal that will break tolerance to a self antigen.

20. The immunogenic composition of claim 13 or use of claim 14 wherein said use comprises gene therapy.

21. A polynucleotide having a sequence encoding the viral vector of any of claims 1 to 11.

22. A host cell transduced with the viral vector of any of claims 1 to 11.

23. A method of producing the viral vector of any of claims 1 to 11.

24. The method of claim 23 comprising the step of incorporating the polynucleotide of claim 21 into a Bacterial Artificial Chromosome (BAC) to produce an Ad-BAC vector.

25. A Bacterial Artificial Chromosome (BAC) clone comprising the polynucleotide sequence of claim 21.

26. A packaging cell line producing the viral vector of any of claims 1 to 11.

27. The packaging cell line of claim 26, wherein said cell comprises the complement of any genes functionally deleted in the viral vector of any of claims 1 to 11.

28. An isolated nucleic acid molecule having a sequence at least 98% identical to SEQ ID NO. 1 over its entire length.

29. An isolated nucleic acid molecule having a sequence complementary to the sequence of claims 28.