CLAIMS:

1. An adenovirus having a capsid comprising a hexon protein, a penton protein, and a fiber protein, wherein said hexon protein is the hexon protein of SAdV-A1302 with the amino acids 1 to 950 of SEQ ID NO: 9, said capsid encapsidating a heterologous nucleic acid comprising a gene operably linked to expression control sequences which direct at least one of transcription, translation, and expression of said gene in a host cell.

2. The adenovirus according to claim 1, further comprising a 5' cis-element and a 3' adenovirus cis-element necessary for replication and encapsidation.

3. The adenovirus according to claim 1, wherein said adenovirus lacks all or a part of the E1 gene.

4. The adenovirus according to claim 3, wherein said adenovirus is replication--defective.

5. The adenovirus according to claim 1, wherein said penton protein is the penton protein of SAdV-A1302 with the amino acids 1 to 528 of SEQ ID NO: 5.

6. The adenovirus according to claim 1, wherein said fiber protein is the fiber protein of SAdV-A1302 with the amino acids 1 to 440 of SEQ ID NO: 19.

7. The adenovirus according to claim 1, wherein said penton protein is the penton protein of SAdV-A1302 with the amino acids 1 to 528 of SEQ ID NO: 5, and wherein said fiber protein is the fiber protein of SAdV-A1302 with the amino acids 1 to 440 of SEQ ID NO: 19.

8. The adenovirus according to claim 1, wherein said capsid is a hybrid capsid.

9. The adenovirus according to claim 8, wherein said hybrid capsid comprises a capsid protein from an adenovirus selected from SAdV-A1320, SAdV-A1331, and SAdV-A1337.

10. The adenovirus according to claim 9, wherein said penton protein is selected from

a penton protein of SAdV-A1320 with the amino acids 1 to 542 of SEQ ID NO: 29;

a penton protein of SAdV-A1331 with the amino acids 1 to 539 of SEQ ID NO: 54; and

a penton protein of SAdV-A1337 with the amino acids 1 to 532 of SEQ ID NO: 81;

or said fiber protein is selected from

a fiber protein of SAdV-A1320 with the amino acids 1 to 445 of SEQ ID NO: 44;

a fiber protein of SAdV-A1331 with the amino acids 1 to 445 of SEQ ID NO: 69; and

a fiber protein of SAdV-A1337 with the amino acids 1 to 490 of SEQ ID NO: 96.

11. The adenovirus according to claim 1, wherein said adenovirus further comprises at least one simian adenovirus protein selected from the group consisting of:

E1b, small T/19K, SEQ ID NO: 2;

E1b, large T/55K, SEQ ID NO: 21;

52/55D, SEQ ID NO: 3;

IIIa, SEQ ID NO: 4;

V, SEQ ID NO: 6;

pX, SEQ ID NO: 7;

VI, SEQ ID NO: 8;

Endoprotease, SEQ ID NO: 10;

100 kD, SEQ ID NO: 11;

22 kD, SEQ ID NO: 22;

VIII, SEQ ID NO: 12;

E3/12.5 K, SEQ ID NO: 13;

CR1-alpha SEQ ID NO: 23;

gp19K, SEQ ID NO: 14;

CR1-beta, SEQ ID NO: 15;

CR1-gamma, SEQ ID NO: 16;

CR1-delta, SEQ ID NO: 17;

RID-beta, SEQ ID NO: 18; and

E3/14.7K, SEQ ID NO: 24.

12. A composition comprising an adenovirus according to claim 1 in a pharmaceutically acceptable carrier.