Claims

1. A replication competent oncolytic group B adenovirus enadenotucirev (EnAd) comprising:
   two or more transgenes,
   wherein a first transgene comprises a DNA sequence encoding B7-1 protein,
   wherein an additional transgene encodes an anti-CD3 antibody or binding fragment thereof, and
   wherein said transgenes are located between the stop codon and polyA recognition site of the adenoviral gene L5 and the stop codon and polyA recognition site of gene E4, under the control of a major late promoter endogenous to the adenovirus.
2. The replication competent oncolytic virus according to claim 1, wherein the virus has a formula (I):

$$5'ITR\text{-}B_1\text{-}B_A\text{-}B_2\text{-}B_X\text{-}B_B\text{-}B_Y\text{-}B_3\text{-}3'ITR \qquad (I)$$

   B_1 is a bond or comprises: E1A, E1B or E1A-E1B;
   B_A is E2B-L1-L2-L3-E2A-L4;
   B_2 is a bond or comprises E3 or a transgene;
   B_X is a bond or a DNA sequence comprising: a restriction site, one or more transgenes or both;
   B_B comprises L5;
   B_Y comprises a transgene cassette comprising a transgene encoding a B7-1 protein , a transgene encoding said anti-CD3 antibody or binding fragment thereof, and a regulatory element or a combination of regulatory elements; and
   B_3 comprises said E4.
3. The replication competent oncolytic virus according to claim 2, wherein the regulatory element is a high efficiency self-cleavable peptide.
4. The replication competent oncolytic virus according to claim 3, wherein the high efficiency self-cleavable peptide is selected from P2A, T2A, F2A and E2A.
5. The replication competent oncolytic virus according to claim 1, wherein one or more proteins encoded by the virus are suitable for expression on the surface of an infected cancer cell, and wherein said proteins are not fusion proteins.
6. The replication competent oncolytic virus according to claim 1, wherein the virus encodes multiple proteins for surface expression on an infected cancer cell.
7. The replication competent oncolytic virus according to claim 6, wherein the proteins are independently processed and expressed in physically separate locations on the cancer cell membrane.
8. The replication competent oncolytic virus according to claim 1, wherein the antibody or binding fragment further comprises a transmembrane sequence or GPI anchor such that it is a cell membrane-anchored form.
9. The replication competent oncolytic virus according to claim 1, wherein the anti-CD3 is a scFv antibody fragment.

10. The replication competent oncolytic virus according to claim 1, wherein the B7-1 protein is a full-length protein.
11. The replication competent oncolytic virus according to claim 1, wherein the B7-1 protein comprises a transmembrane domain or GPI anchor.
12. The replication competent oncolytic virus according to claim 1, wherein the B7-1 protein comprises a transmembrane domain from a B7 protein.
13. The replication competent oncolytic virus according to claim 1, wherein the virus comprises a third transgene encoding a polypeptide selected from the group comprising a cytokine, a chemokine, a ligand, an antagonistic antibody molecule, and an agonistic antibody molecule.
14. The replication competent oncolytic virus according to claim 1, wherein the B7-1 protein is human.
15. The replication competent oncolytic virus according to claim 14, wherein the B7-1 protein has the sequence shown in SEQ ID NO: 11 or a sequence at least 95% identical thereto.
16. The replication competent oncolytic virus according to claim 1, wherein the antibody molecule or binding fragment thereof comprises an anti-human CD3 antigen binding domain.
17. The replication competent oncolytic virus according to claim 16, wherein the binding fragment has a sequence shown in SEQ ID NOs: 15 or 99.
18. The replication competent oncolytic virus according to claim 1, comprising SEQ ID NO: 96.
19. A pharmaceutical composition comprising the replication competent oncolytic virus according to claim 1, and a pharmaceutically acceptable excipient.
20. The replication competent oncolytic virus according to claim 1, wherein E4 open reading frame 4 is deleted.