CLAIMS

1. A polypeptide construct comprising a peptide or polypeptide signaling ligand linked to an antibody or antigen binding portion thereof which binds to a cell surface-associated antigen, wherein the signaling ligand is an attenuated IFNα comprising, relative to wildtype, a mutation as depicted in an amino acid sequence selected from the group consisting of R144S (SEQ ID NO:40), R144T (SEQ ID NO:41), R144Y (SEQ ID NO:43), R144I (SEQ ID NO:35), R144L (SEQ ID NO:37), A145D (SEQ ID NO:44), A145H (SEQ ID NO:47), A145Y (SEQ ID NO:58), A145K (SEQ ID NO:49) and R144A+YNS (SEQ ID NO:68).

2. The polypeptide construct as claimed in claim 1 in which the attenuated IFNα is linked to the antibody or antigen binding portion thereof via a peptide bond.

3. The polypeptide construct as claimed in claim 1 or claim 2 in which attenuated IFNα is linked to the antibody or antigen binding portion thereof directly or via a linker of 1 to 20 amino acids in length.

4. The polypeptide construct as claimed in claim 1 or claim 2 in which the attenuated IFNα is linked to the C-terminus of the light chain or heavy chain constant region of the antibody or antigen binding portion thereof.

5. The polypeptide construct as claimed in claim 1 or claim 2 in which the antibody or antigen binding portion thereof binds an antigen wherein the extracellular domain thereof has a molecular weight of less than 240kD.

6. The polypeptide construct as claimed in claim 1 or claim 2 in which the antibody or antigen binding portion thereof binds an antigen wherein the antigen is present on the cell at a density of greater than 12,600 copies per cell or greater than 15,000 copies per cell.

7. The polypeptide construct as claimed in claim 1 or claim 2 in which the antibody or antigen binding portion thereof binds to the cell surface-associated antigen with an affinity of from 50 nM, from 25 nM, from 10 nM, or from 5 nM to 1pM.

8. The polypeptide construct as claimed in claim 1 or claim 2 in which the the cell surface-associated antigen is selected from the group consisting of CD38, HM1.24, CD56, CS1, CD20, CD74, IL-6R, Blys (BAFF), BCMA, HLA-SR, Kininogen, beta2 microglobulin, FGFR3, ICAM-1, matriptase, CD52, EGFR, GM2, alpha4-integrin, IFG-1R, KIR, CD3, CD4, CD8, CD24, CD44, CD69, CD71, CD83, CD86, CD96, HLA-DR, PD-1, ICOS, CD33, CD115, CD11c, CD14, CD52, CD14, FSP1, FAP, PDGFR alpha, PDGFR beta, ASGR1, ASGR2, FSP1, RTI140/Ti-alpha, HTI56, VEGF receptor, CD241 the product of the RCHE gene, CD117 (c-kit), CD71 (transferrin receptor), CD36 (thrombospondin receptor), CD34, CD45RO, CD45RA, CD115, CD168, CD235, CD236, CD237, CD238, CD239 and CD240.

9. The polypeptide construct as claimed in claim 1 or claim 2 in which the antibody or antigen binding portion thereof is an antibody or an Fab fragment.

10. The polypeptide construct as claimed in claim 1 or claim 2 in which the construct has an Antigen-Specificity Index of greater than 50.

11. The polypeptide construct as claimed in claim 10 in which the construct has an Antigen-Specificity Index of greater than 100.

12. The polypeptide construct as claimed in claim 11 in which the construct has an Antigen-Specificity Index of greater than 1000.

13. A composition comprising the polypeptide construct as claimed in any one of claims 1 to 12 and a pharmaceutically acceptable carrier or diluent.

14. Use of polypeptide construct as claimed in any one of claims 1 to 12 in the preparation of a medicament for treating a tumour in a subject.

15. The use according to claim 14 wherein the tumour is selected from multiple myeloma or non-Hodgkin’s lymphoma