Claims

1. ~~Use of a~~A bi-specific antibody specific against digoxigenin (DIG) and a target protein for use in therapy or diagnostics, wherein~~for delivery of~~ a nucleic acid which has been conjugated to DIG is delivered to a target cell or tissue, wherein the bi-specific antibody comprises:

   (a) a first antigen-binding site that binds to DIG comprising:

      (i) a heavy chain variable domain selected from SEQ ID NO. 3, SEQ ID NO 3 with the mutations S49A, I58A and A61P or SEQ. ID NO. 2 and;

      (ii) a light chain variable domain selected from SEQ ID NO 5 or SEQ. ID NO. 1; and

   (b) a second antigen-binding site that binds to a target protein.

2. ~~Use~~ The antibody for use according to claim 1, wherein said bi-specific antibody comprises as heavy chain Fd-Fragment (V_H and CH_1) SEQ. ID NO. 4 or SEQ. ID NO. 36 and as L-chain SEQ. ID NO. 6 or SEQ. ID NO. 37.

3. ~~Use~~ The antibody for use according to claim 1 or 2, wherein the target protein is a cell surface antigen.

4. ~~Use~~ The antibody for use according to claim 3, wherein the cell surface antigen is a tumor antigen.

5. ~~Use~~ The antibody for use according to ~~any of~~ claim 1 or 2, wherein the target protein is selected from the group of Her2, IGF1 R, CD22, CD33, LeY, VEGFR1, Her2 (Lieberman).

6. ~~Use~~ The antibody for use according to any of claims 1 to 5, wherein the nucleic acid is a therapeutic or diagnostic agent.

7. ~~Use~~ The antibody for use according to any of claims 1 to 6, wherein the nucleic acid is double-stranded RNA.

8. ~~Use~~ The antibody for use according to any of claims 1 to 7, wherein the nucleic acid is conjugated to a transfection reagent.

9. ~~Use~~ The antibody for use according to claim 8, wherein the transfecting reagent is a liposomal transfection reagent or a transfecting peptide.

10. ~~Use~~ The antibody for use according to any of claims 1 to 7, wherein the nucleic acid is coupled to an endosome escape or disruption module.

11. ~~Use~~ The antibody for use according to claim 10, wherein the nucleic acid is coupled to a peptide which mediates endosome escape or disruption.

12. ~~Use~~ The antibody for use according to claim 10, wherein the endosome escape or disruption modules comprises a dynamic polyconjugate (DPC).

13. A pharmaceutical composition comprising a bi-specific antibody specific against digoxigenin (DIG) and a target protein for delivery of a nucleic acid to a target cell or tissue, wherein the bi-specific antibody comprises: (a) a first antigen-binding site that binds to DIG comprising: (i) a heavy chain variable domain selected from SEQ ID. NO. 3, SEQ ID NO 3 with the mutations S49A, I58A and A61P or SEQ. ID NO. 2, and; (ii) a light chain variable domain selected from SEQ ID NO 5 or SEQ. ID NO. 1; and (b) a second antigen-binding site that binds to a target protein; wherein said antibody is coupled to a digoxigenated therapeutic or diagnostic nucleic acid.

14. Use of the pharmaceutical composition of claim 13 in the manufacture of a medicament for targeted gene therapy.

15. The pharmaceutical composition of claim 13 for use in targeted gene therapy.