5. The immunoconjugate of any one of claims 1 to 4, wherein said Fc domain comprises one or more amino acid mutation that reduces the binding of the Fc domain to an Fc receptor, particularly an Fcγ receptor.

6. The immunoconjugate of claim 5, wherein said amino acid mutation is an amino acid substitution at position P329 (EU numbering).

7. The immunoconjugate of claims 5 or 6, wherein the Fc domain comprises the amino acid substitutions L234A, L235A and P329G (EU numbering) in each of its subunits.

8. The immunoconjugate of any one of claims 1 to 7, wherein said immunoglobulin molecule is an IgG class immunoglobulin.

9. The immunoconjugate of any one of claims 1 to 8, wherein said cytokine is fused to the carboxy-terminal amino acid of one of the immunoglobulin heavy chains, optionally through a linker peptide.

10. The immunoconjugate of any one of claims 1 to 9, wherein said first and said second Fab molecule is directed to an antigen associated with a pathological condition.

~~11. The immunoconjugate of any one of claims 1 to 10, wherein said first and said second Fab molecule is directed to an antigen selected from the group of Fibroblast Activation Protein (FAP), the A1 domain of Tenascin-C (TNC A1), the A2 domain of Tenascin-C (TNC A2), the Extra Domain B of Fibronectin (EDB),~~

~~Carcinoembryonic Antigen (CEA), and Melanoma-associated Chondroitin Sulfate Proteoglycan (MCSP).~~

1112. The immunoconjugate of any one of claims 1 to 1011, wherein said cytokine is a single chain cytokine.

1213. The immunoconjugate of any one of claims 1 to 1112, wherein said cytokine is IL-2.

1314. An isolated polynucleotide encoding the immunoconjugate of any one of claims 1 to 1213.

1415. An expression vector comprising the isolated polynucleotide of claim 1314.

1516. A host cell comprising the isolated polynucleotide of claim 1314 or the expression vector of claim 1415.

1617. A method of producing an immunoconjugate comprising a first and a second antigen binding Fab molecule, an Fc domain, and a single cytokine, comprising culturing the host cell of claim 1516 under conditions suitable for the expression of the immunoconjugate and optionally recovering the immunoconjugate.

1718. A pharmaceutical composition comprising the immunoconjugate of any one of claims 1 to 1213 and a pharmaceutically acceptable carrier.

1819. The immunoconjugate of any one of claims 1 to 1213, or the pharmaceutical composition of claim 1718, for use in the treatment of a disease in an individual in need thereof.

1920. Use of the immunoconjugate of any one of claims 1 to 1213, or the pharmaceutical composition of claim 1718, in the manufacture of a medicament for the treatment of a disease in an individual in need thereof.

2021. The immunoconjugate or the pharmaceutical composition of claim 1819, wherein said disease is cancer.

2122. The use of claim 1920, wherein said disease is cancer.