

CLAIMS

1. DNA construct for expressing a recombinant protein in mammalian cells, wherein the DNA construct comprises:
 - a nucleic acid sequence of SEQ ID No 1, wherein the nucleic acid sequence of SEQ ID 1 is a TIS sequence; and
 - a nucleic acid sequence which encodes a signal peptide;and wherein the nucleic acid sequence of SEQ ID No 1 comprises:
 - the ATG start codon in the nucleic acid sequence which encodes the first amino acid residue of the signal peptide; and
 - the first two nucleotides downstream of the ATG start codon in the nucleic acid sequence which encodes the second amino acid residue of the signal peptide.
2. DNA construct according to claim 1, wherein the TIS sequence transcribes into an RNA motif that functions as the protein translation initiation site in an mRNA transcript.
3. DNA construct according to claim 1 or 2, wherein the TIS sequence is a Kozak sequence which transcribes into an RNA motif that functions as the protein translation initiation site in an mRNA transcript.
4. DNA construct according to any one of the claims 1-3, wherein the nucleic acid sequence of SEQ ID 1 comprises:
 - 6 nucleotides upstream of an ATG start codon; and
 - 2 nucleotides downstream of an ATG start codon.
5. DNA construct according to any one of the claims 1-4, wherein the nucleic acid sequence which encodes a signal peptide comprises a nucleic acid sequence of SEQ ID No 2.
6. DNA construct according to any one of the claims 1-5, wherein the nucleic acid sequence of SEQ ID No 1 comprises:
 - the ATG start codon in SEQ ID No 2; and

- the first two nucleotides downstream of the ATG start codon in the nucleic acid sequence of SEQ ID No 2.
- 5 7. DNA construct according to any one of the claims 1-6, wherein the DNA construct comprises a nucleic acid sequence which encodes said recombinant protein, wherein said recombinant protein is preferably an antibody, wherein said antibody is most preferably a monoclonal antibody, a polyclonal antibody, a chimeric antibody or a fragment of said antibody.
- 10 8. DNA construct according to claims 7, wherein the DNA construct which comprises the nucleic acid sequence which encodes said recombinant protein is a monoclonal antibody, preferably an IgG4 monoclonal antibody.
- 15 9. DNA construct according to any one of the claims 1-8, wherein the nucleic acid sequence which encodes a signal peptide is operably linked to the nucleic acid sequence which encodes the recombinant protein.
- 20 10. DNA construct according to any one of the claims 1-9, wherein the nucleic acid sequence which encodes said recombinant protein comprises:
 - a first nucleic acid sequence which encodes a heavy chain of an antibody; and
 - a second nucleic acid sequence which encodes a light chain of an antibody.
- 25 11. DNA construct according to claim 10, wherein the nucleic acid sequence which encodes a signal peptide is operably linked to:
 - the first nucleic acid sequence which encodes the heavy chain of an antibody; and/or
 - the second nucleic acid sequence which encodes the light chain of an antibody.
- 30 12. Expression vector which comprises the DNA construct according to any one of the claims 1-11.
13. Expression cassette comprising the DNA construct according to any one of the claims 1-11.

14. Host cell which comprises a DNA construct according to any one of the claims 1-11, wherein said host cell is preferably an eukaryotic cell.

15. Host cell according to claim 14, wherein said host cell is a mammalian cell.

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16. Recombinant protein expressed by a DNA construct according to any one of the claims 1-11 wherein said recombinant protein is preferably an antibody or an antibody fragment thereof, more preferably a monoclonal antibody or a fragment thereof, most preferably an IgG4 monoclonal antibody or a fragment thereof.

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17. RNA expressed by the DNA construct according to any one of the claims 1-11.

18. Method of expressing a recombinant protein, comprising the steps of:

- cloning one or more open reading frames encoding a recombinant protein, or one or more polypeptide chains thereof, into one or more DNA constructs according to any one of the claims 1-11; and
- transfecting the resulting nucleic acid sequences into a host cell, wherein the host cell is preferably an eukaryotic cell, more preferably a mammalian cell.

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19. Method according to claim 18, further comprising the step of integrating the transfected nucleic acid sequence into the genome of the host cell.

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20. DNA construct for expressing a signal peptide, wherein the DNA construct comprises a nucleic acid sequence which encodes a signal peptide, wherein the nucleic acid sequence which encodes a signal peptide comprises a nucleic acid sequence of SEQ ID No 2.

21. Expression vector which comprises the DNA construct according to claim 20.

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22. Expression cassette comprising the DNA construct according to claim 20.

23. Host cell which comprises a DNA construct according to claim 20.

24. RNA expressed by the DNA construct according to claim 20.