Claims

1. An expression cassette which comprises a promoter, a polynucleotide sequence encoding a polypeptide, and expression enhancing element wherein expression enhancing element comprises a non-translated genomic DNA sequence downstream of a mammalian Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) promoter, wherein the polypeptide encoded by the polynucleotide sequence is not GAPDH, and wherein the genomic DNA sequence downstream of the mammalian GAPDH promoter starts within a region spanning from nucleotide position around +1 to nucleotide position around +7000, wherein the nucleotide position is relative to the transcription start of the GAPDH mRNA, and wherein the length of the non-translated genomic DNA sequence downstream of the mammalian GAPDH promoter is from around 200 to around 2800 nucleotides and wherein the expression cassette further comprises a non-translated genomic DNA sequence upstream of a mammalian GAPDH promoter, wherein the non-translated genomic DNA sequence upstream of the mammalian GAPDH promoter starts within a region spanning from around the 5' end of the mammalian GAPDH promoter to nucleotide position around -3500, wherein the nucleotide position is relative to the transcription start of the GAPDH mRNA, and wherein the length of the non-translated genomic DNA sequence upstream of the mammalian GAPDH promoter is from around 200 to around 2800 nucleotides.

2. An expression cassette which comprises a promoter, a polynucleotide sequence encoding a polypeptide, and a non-translated genomic DNA sequence upstream of a mammalian GAPDH promoter, wherein the polypeptide encoded by the polynucleotide sequence is not GAPDH, and wherein the non-translated genomic DNA sequence upstream of the mammalian GAPDH promoter starts within a region spanning from around the 5' end of the mammalian GAPDH promoter to nucleotide position around -3500, wherein the nucleotide position is relative to the transcription start of the GAPDH mRNA, wherein the length of the non-translated genomic DNA sequence upstream of the mammalian GAPDH promoter is from 200 to around 2800 nucleotides, with the proviso that the expression cassette does not comprise a mammalian GAPDH promoter or fragments thereof.

3. The expression cassette of claim 2, wherein the expression cassette further comprises a non-translated genomic DNA sequence downstream of a mammalian GAPDH promoter,

wherein non-translated genomic DNA sequence downstream of the mammalian GAPDH promoter starts within a region spanning from nucleotide position around +1 to nucleotide position around +7000, wherein the nucleotide position is relative to the transcription start of the GAPDH mRNA, and wherein the length of the non-translated genomic DNA sequence downstream of the mammalian GAPDH promoter is from around 200 to around 2800 nucleotides.

4. The expression cassette of any one of claims 1 to 3, wherein the non-translated genomic DNA sequence downstream and/or upstream of the mammalian GAPDH promoter is not operably linked to the polynucleotide sequence encoding the polypeptide.

5. The expression cassette of claim 1 or 3, wherein the non-translated genomic DNA sequence downstream of the mammalian GAPDH promoter starts downstream of the mammalian GAPDH polyadenylation site and wherein the length of the non-translated genomic DNA sequence downstream of the mammalian GAPDH promoter is at least around 100 nucleotides and extends at its maximum to the second last intron of the IFF01 gene.

6. The expression cassette of claim 1 or 2, wherein the length of the non-translated genomic DNA sequence upstream of the mammalian GAPDH promoter is at least around 100 nucleotides and extends at its maximum to the third last intron of the NCAPD2 gene.

7. The expression cassette of any one of claims 1 to 3, wherein the non-translated genomic DNA sequence downstream and/or upstream of the mammalian GAPDH promoter is of rodent or human origin.

8. The expression cassette of claim 1 or 3, wherein the non-translated genomic DNA sequence downstream of the mammalian GAPDH promoter comprises the nucleotide sequence selected from the group consisting of: SEQ ID NOs: 8 and 21; a nucleotide sequence at least 80% identical to SEQ ID NOs: 8 or 21; fragments thereof; or a complementary nucleotide sequence thereof.

9. The expression cassette of claim 1 or 2, wherein the non-translated genomic DNA sequence upstream of the mammalian GAPDH promoter comprises a nucleotide sequence selected from the group consisting of SEQ ID NO: 7, 9, 10, 11, 12, 13, 14, 15, 16, 20, 22,

23, 24, 25, 26, 27 and 28 comprising five or less nucleic acid modifications; a nucleotide sequence at least 80% identical to the nucleotide sequence selected from the group consisting of SEQ ID NO: 7, 9, 10, 11, 12, 13, 14, 15, 16, 20, 22, 23, 24, 25, 26, 27 and 28 or fragments thereof; fragments thereof; or a complementary nucleotide sequence thereof.

10. The expression cassette of any one of claims 1 to 3, wherein the promoter is selected from the group consisting of SV40 promoter, MPSV promoter, mouse CMV, human tk, human CMV, rat CMV, human EF1alpha, Chinese hamster EF1alpha, human GAPDH, hybrid promoters including MYC, HYK and CX promoter.

11. The expression cassette of any one of claims 1 to 3, wherein the polypeptide is selected from the group consisting of antibodies, antibody fragments or antibody derivates.

12. An expression vector, which comprises in order:
a) a non-translated genomic DNA sequence upstream of a mammalian GAPDH promoter, wherein the non-translated genomic DNA sequence upstream of the mammalian GAPDH promoter starts within a region spanning from around the 5' end of the mammalian GAPDH promoter to nucleotide position around -3500, wherein the nucleotide position is relative to the transcription start of the GAPDH mRNA, and wherein the length of the non-translated genomic DNA sequence upstream of the mammalian GAPDH promoter is from around 200 to around 2800 nucleotides
b) a promoter
c) a polynucleotide sequence encoding a polypeptide
d) a polyadenylation site
e) an enhancer
f) a non-translated genomic DNA sequence downstream of a mammalian GAPDH promoter, wherein the polypeptide encoded by the polynucleotide sequence is not GAPDH, wherein the genomic DNA sequence downstream of the mammalian GAPDH promoter starts within a region spanning from nucleotide position around +1 to nucleotide position around +7000, wherein the nucleotide position is relative to the transcription start of the GAPDH mRNA, and wherein the length of the non-translated genomic DNA sequence downstream of the mammalian GAPDH promoter is from around 200 to around 2800 nucleotides.

13. A host cell comprising an expression cassette of any one of claims 1 to 11 or an expression vector of claim 12.

14. An *in vitro* method for the expression of a polypeptide, comprising transfecting a host cell with the expression cassette of any one of claims 1 to 11 or the expression vector of claim 12 and recovering the polypeptide.

15. Use of an expression cassette of any one of claims 1 to 11 or the expression vector of claim 12 for the in vitro
expression of a heterologous polypeptide from a mammalian host cell.