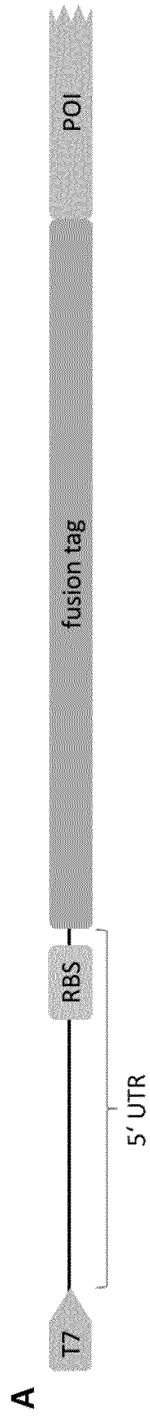


FIGURES

FIGURE 1



5' end CDS

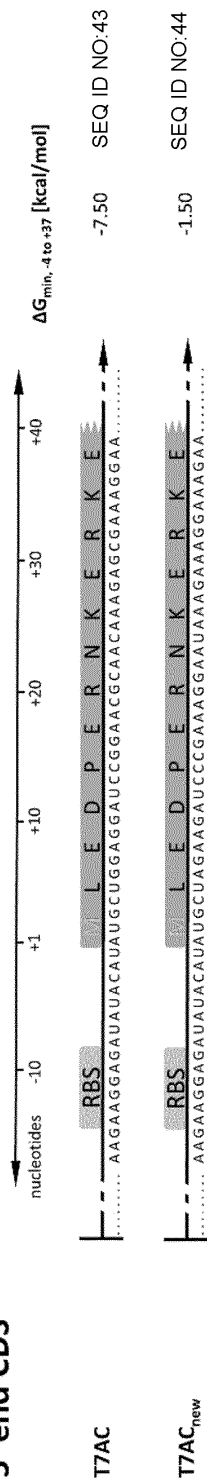


FIGURE 2

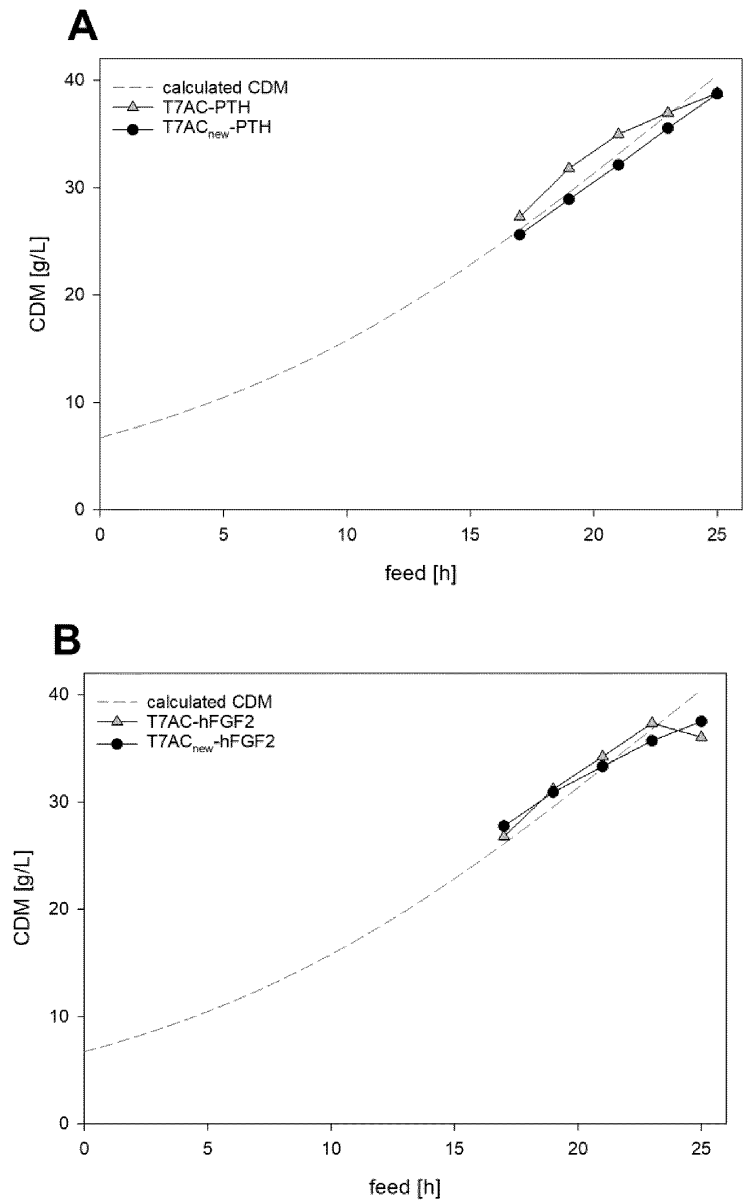


FIGURE 2 continued

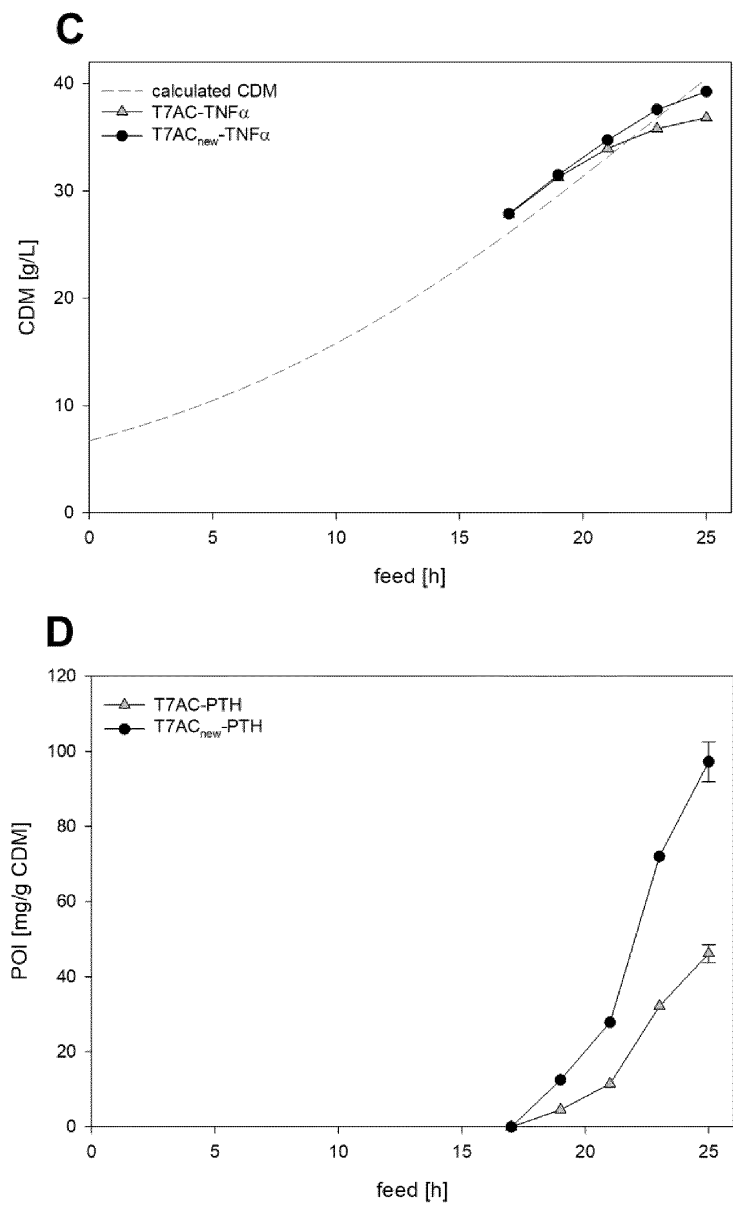


FIGURE 2 continued

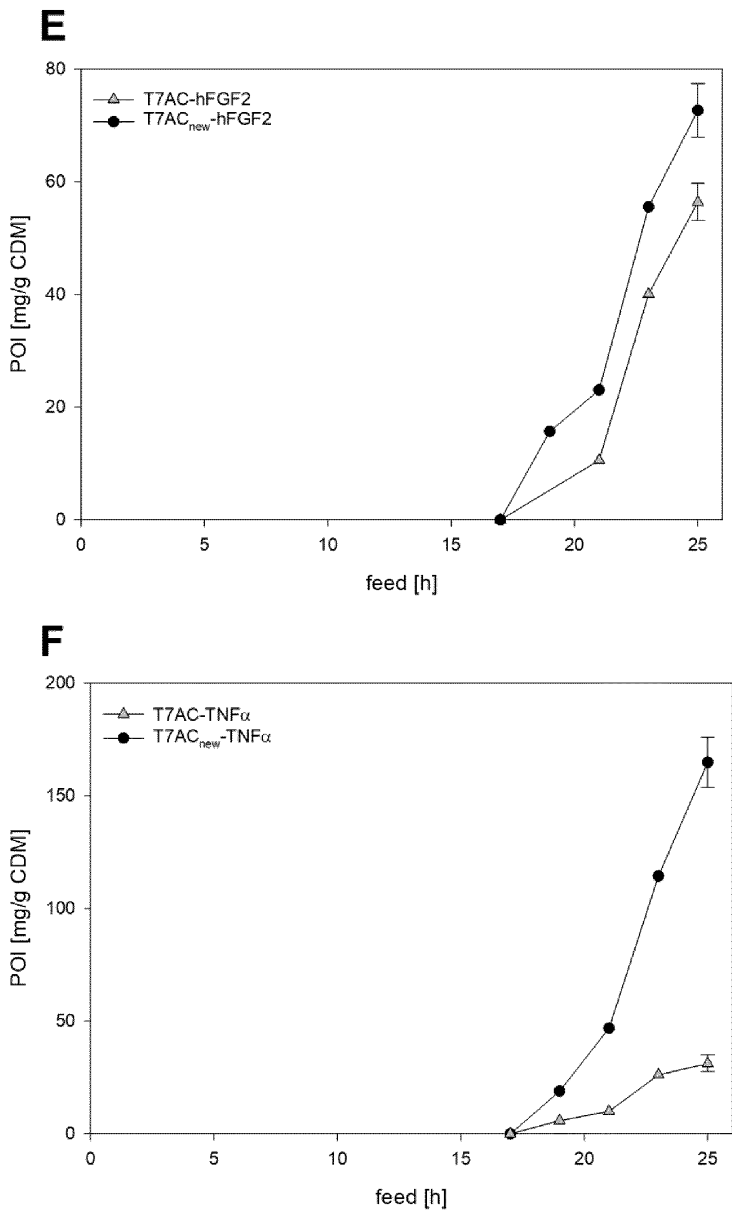


FIGURE 3

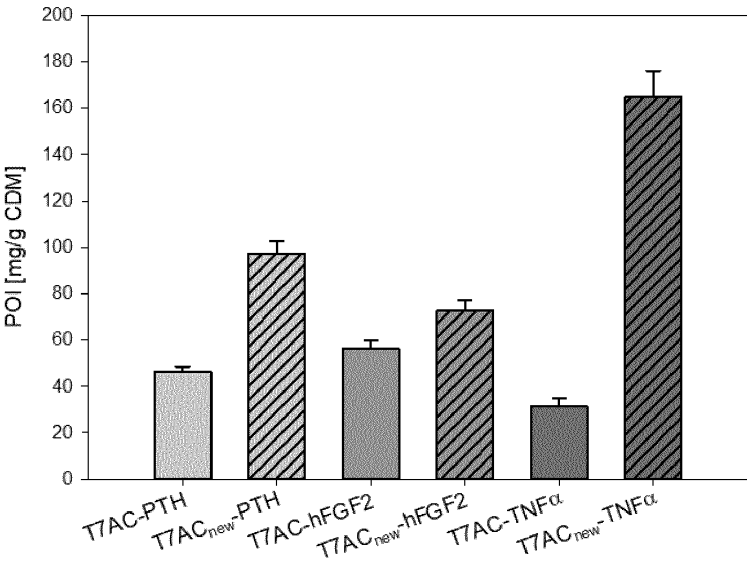


FIGURE 4

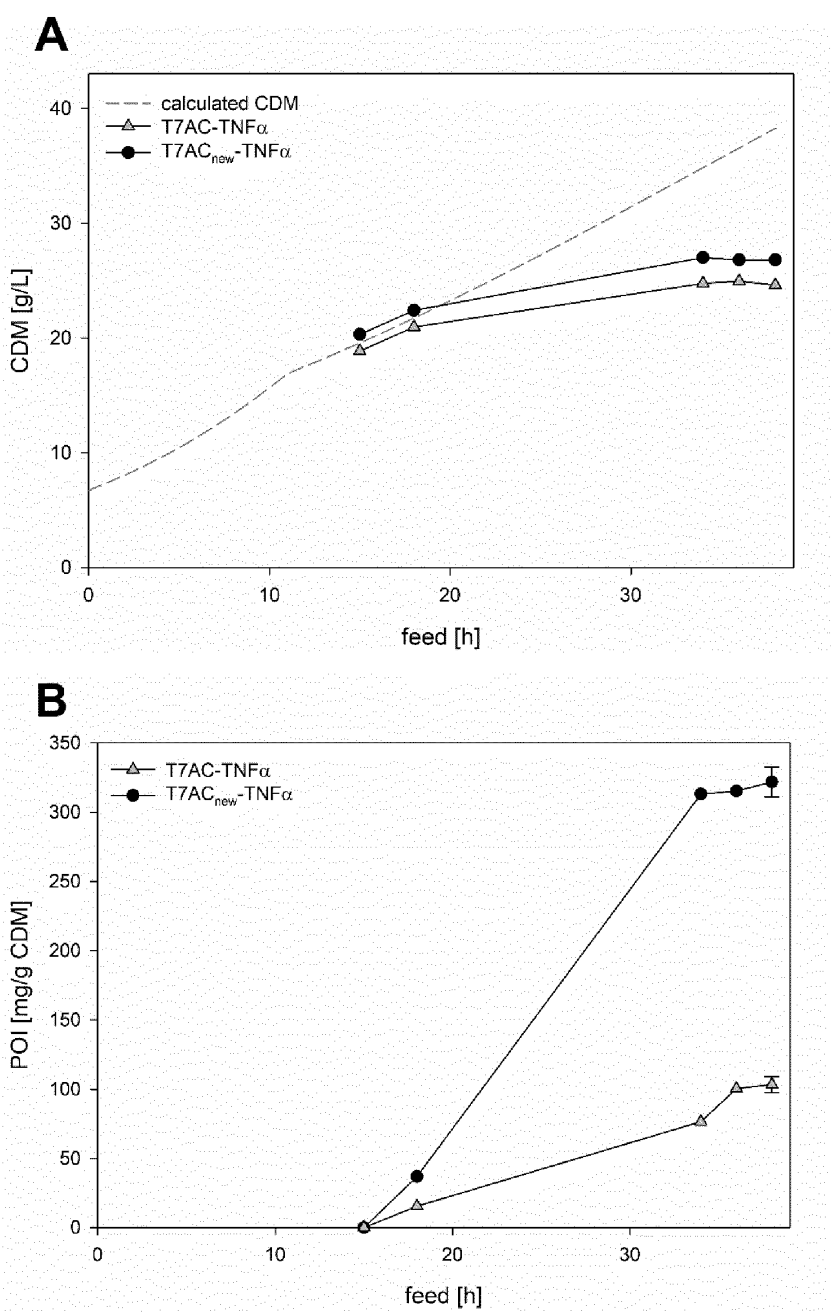


FIGURE 5

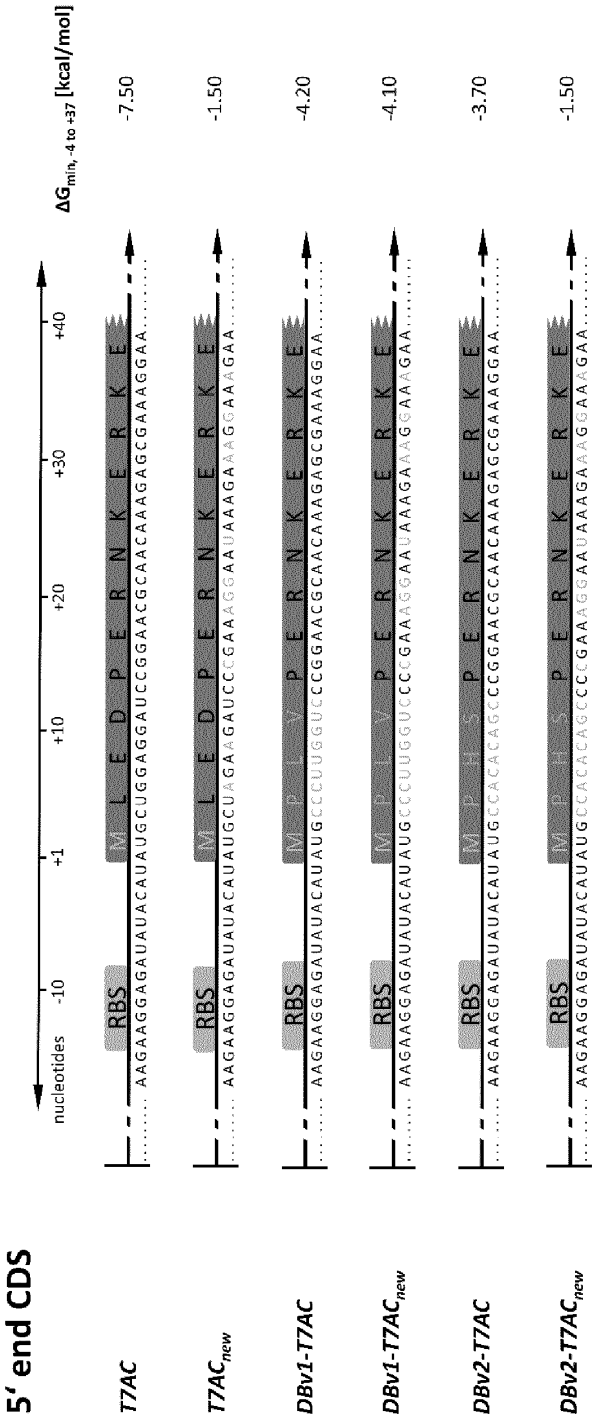


FIGURE 6

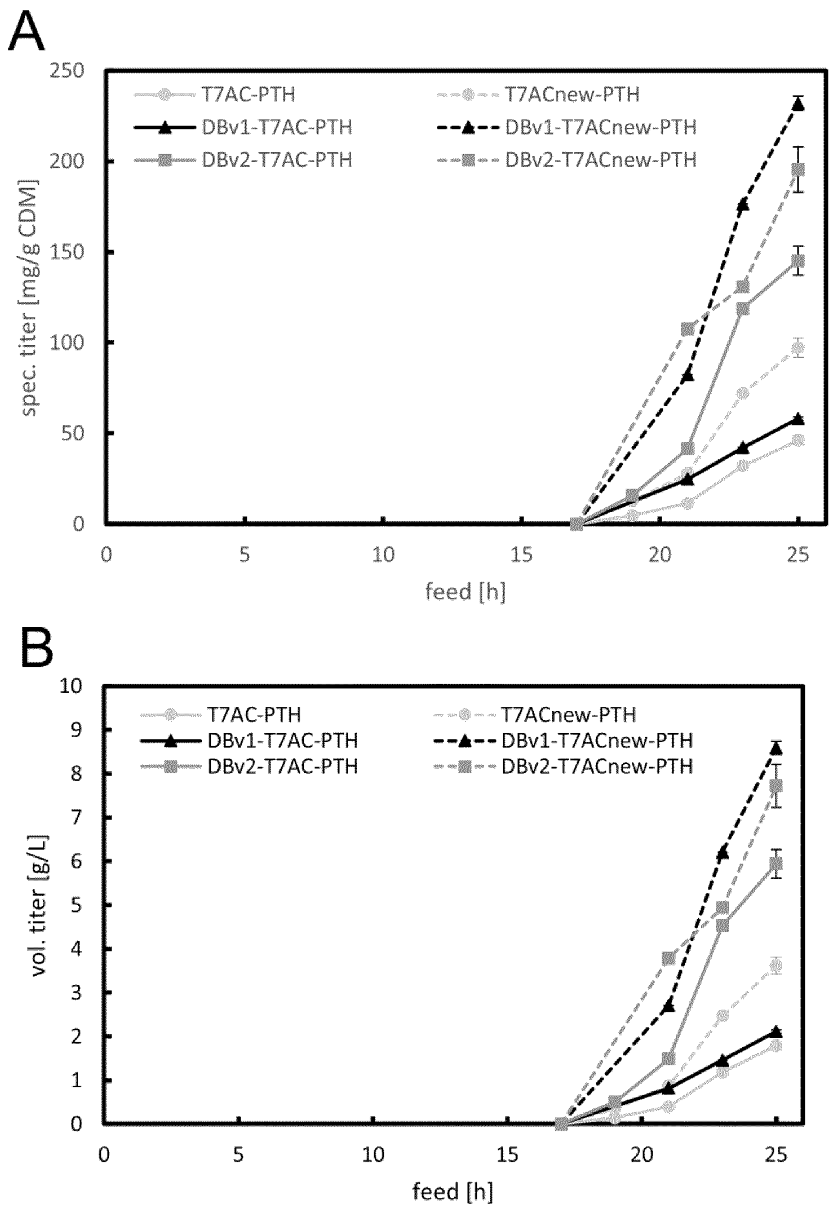


FIGURE 6 continued

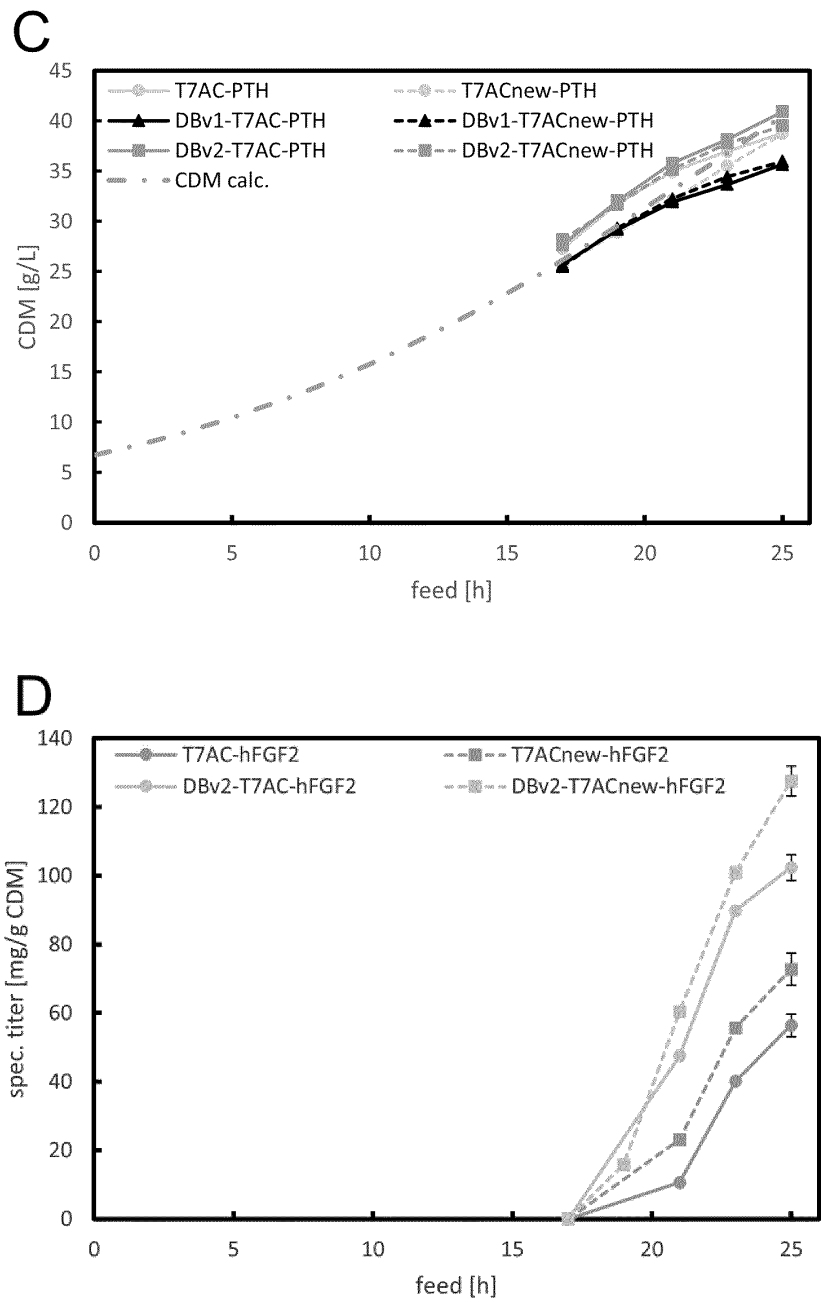


FIGURE 6 continued

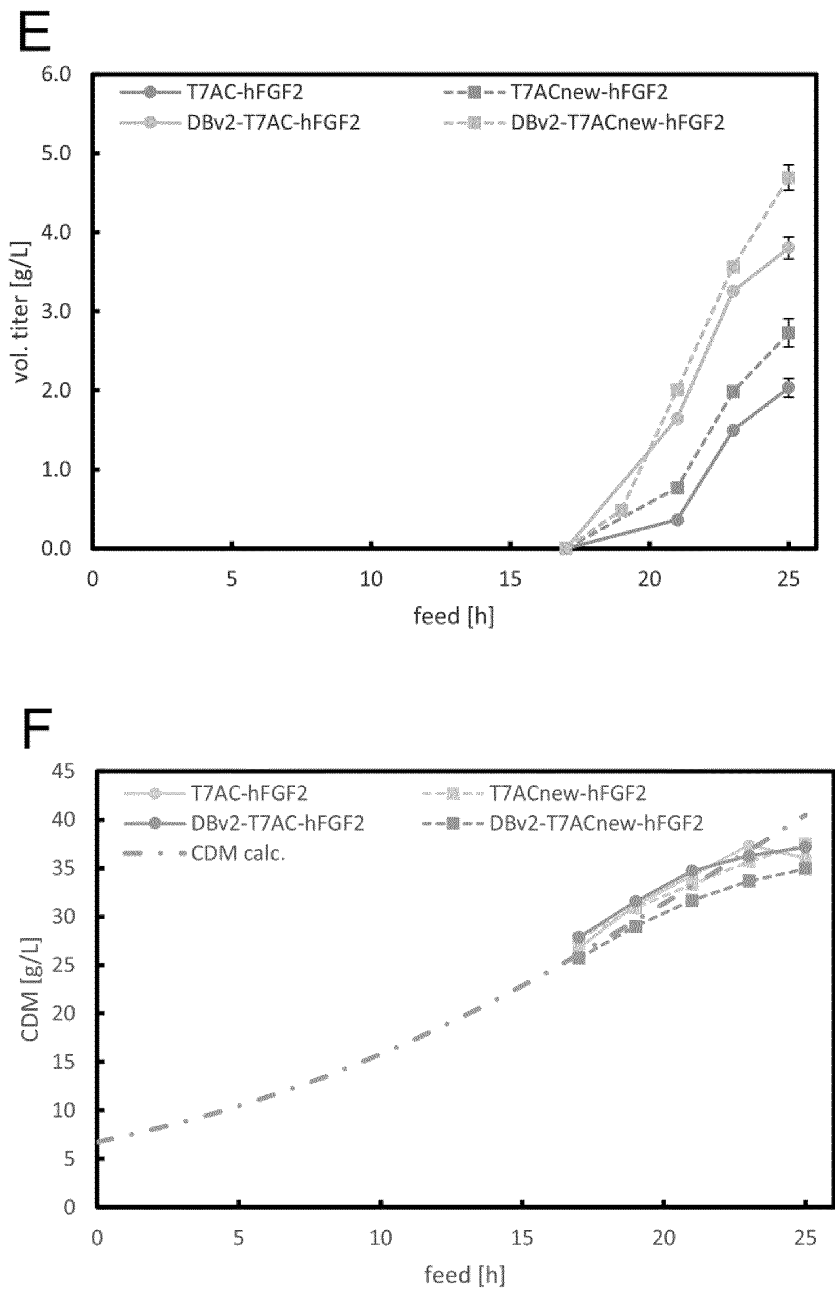


FIGURE 7

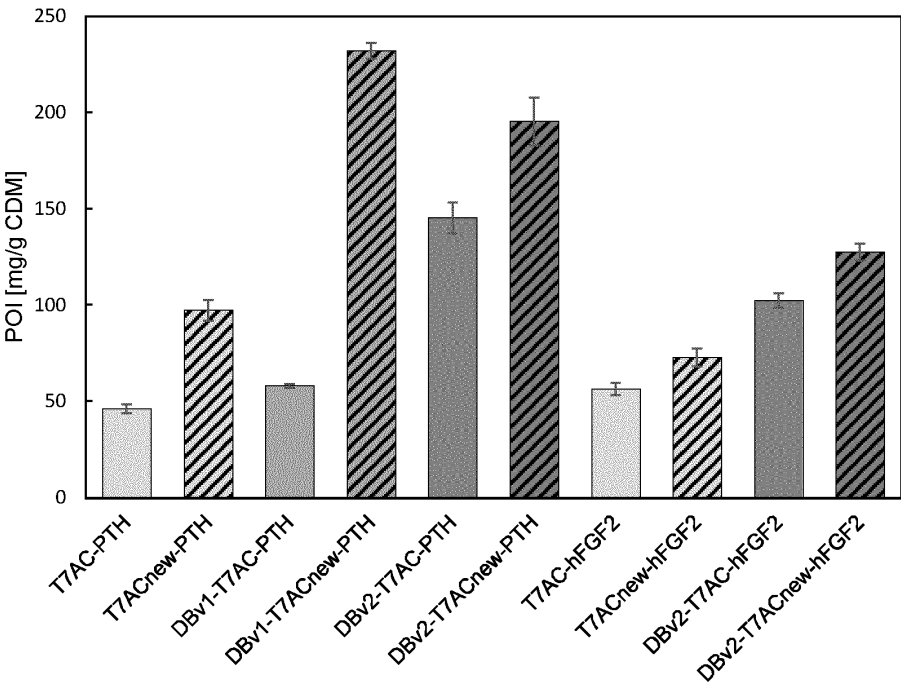


FIGURE 8

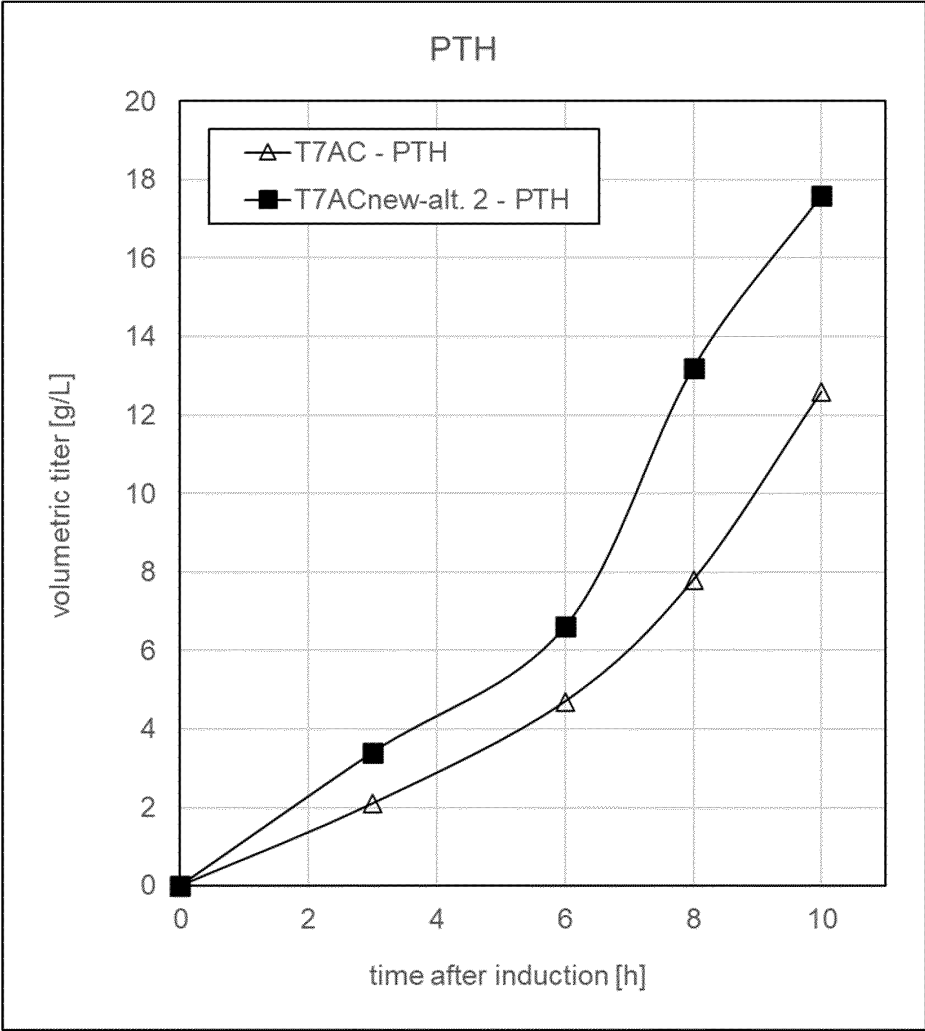


FIGURE 9

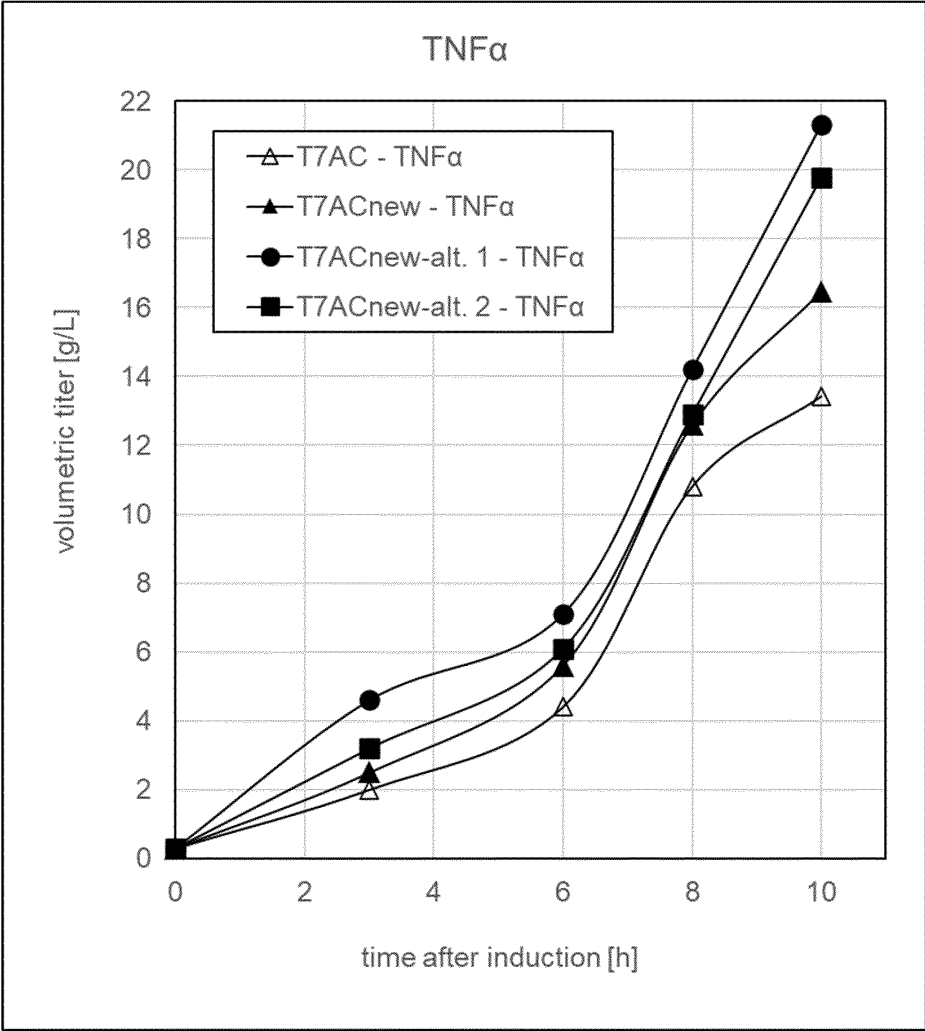


FIGURE 10

SEQ ID NO:1
PERNKERK

5

SEQ ID NO:2
CCG GAA CGC AAC AAA GAG CGA AAG

SEQ ID NO:3
10 CCC GAA AGG AAT AAA GAA AGG AAA

SEQ ID NO:4
LEDPERNKERK

15 SEQ ID NO:5
CTG GAG GAT CCG GAA CGC AAC AAA GAG CGA AAG

SEQ ID NO:6
CTA GAA GAT CCC GAA AGG AAT AAA GAA AGG AAA

20

SEQ ID NO:7
LEDPERNKERKEAELQAQTAEQ

SEQ ID NO:8
25 CTG GAG GAT CCG GAA CGC AAC AAA GAG CGA AAG GAA GCT GAG TTG CAA GCT CAA
ACC GCT GAG CAA

SEQ ID NO:9
CTA GAA GAT CCC GAA AGG AAT AAA GAA AGG AAA GAA GCT GAG TTG CAA GCT CAA

30 ACC GCT GAG CAA

SEQ ID NO:10
TTA GAA GAT CCA GAA AGA AAT AAA GAA AGA AAA GAA GCT GAG TTG CAA GCT CAA
ACC GCT GAG CAA

35

SEQ ID NO:11
TTG GAA GAT CCA GAA CGA AAT AAA GAA AGA AAA GAA GCT GAG TTG CAA GCT CAA
ACC GCT GAG CAA

40

SEQ ID NO:12

LEDPERNKERKEAELEAETAEQ

SEQ ID NO:13

5 CTG GAG GAT CCG GAA CGC AAC AAA GAG CGA AAG GAA GCT GAG TTG GAA GCT GAG
ACC GCT GAG CAA

SEQ ID NO:14

CTA GAA GAT CCC GAA AGG AAT AAA GAA AGG AAA GAA GCT GAG TTG GAA GCT GAG
10 ACC GCT GAG CAA

SEQ ID NO:15

TTA GAA GAT CCA GAA AGA AAT AAA GAA AGA AAA GAA GCT GAG TTG GAA GCT GAG
ACC GCT GAG CAA

15

SEQ ID NO:16

TTG GAA GAT CCA GAA CGA AAT AAA GAA AGA AAA GAA GCT GAG TTG GAA GCT GAG
ACC GCT GAG CAA

20 SEQ ID NO:17

CCA GAA AGA AAT AAA GAA AGA AAA

SEQ ID NO:18

CCA GAA CGA AAT AAA GAA AGA AAA

25

SEQ ID NO:19

TTA GAA GAT CCA GAA AGA AAT AAA GAA AGA AAA

SEQ ID NO:20

30 TTG GAA GAT CCA GAA CGA AAT AAA GAA AGA AAA

SEQ ID NO:25 (amino acid sequence of TNFα)

VRSSSRTPSDKPVAVHVVANPQAEGQLQWLNRRANALLANGVELRDNQLVWPSEGLYLIYSQVLFK
GQGCPSTHVLLTHTISRIAVSYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPIYLGGVFQLEKGDRL
35 SAEINRPDYLDFAESGQVYFGIAL

SEQ ID NO:26 (nucleotide sequence of TNF α)

5'-

GTCCGTTCCAGCAGCCGTACGCCGAGCGATAAACCTGTCGCGCACGTAGTGGCGAATCCGC
AAGCCGAGGGTCAGCTGCAGTGGCTGAATCGTCGCGCGAACGCGCTGCTGGCCAATGGTGT
5 TGAGCTGCGTGACAACCAACTGGTTGTTCCATCCGAAGGCCTGTACCTGATTTATTCTCAAGT
GCTGTTCAAAGGTCAGGGTTGCCCCGAGCACGCACGTGTTGCTGACCCATACCATTAGCCGCA
TCGCAGTCAGCTACCAGACCAAGGTCAACCTGTTGAGCGCGATCAAGTCCCCGTGTCAACGT
GAAACGCCTGAGGGCGCTGAGGCCAAGCCGTGGTATGAGCCGATCTACCTGGGTGGCGTGT
TTCAGCTGGAGAAAGGTGACCGTCTGAGCGCGGAAATCAACCGCCCGGATTATTTAGATTTTG
10 CCGAGTCTGGTCAGGTGTACTTCGGCATTATTGCACTGTAATAA-3'

SEQ ID NO:27 (amino acid sequence of fusion protein comprising CASPON tag and TNF α)

MLEDPERNKERKEAELQAQTAEQH HHHHHHSAW SHPQFEKSGVDVADV RSSSRTPSDKPV AHV
VANPQAEGQLQWLNRRANALLANGVELRDNQLVVPSEGLYLIYSQVLFKGQGPCSTHVLLTHTIS
15 RIAVS YQTKVNLLSAIKSPCQRETPEGAEAKPWYEPIYLGGVFQLEKGDRLSAEINRPDYLDFAES
GQVYFGIIAL

SEQ ID NO:28 (nucleotide sequence encoding fusion protein of SEQ ID NO:27, comprising T7AC tag sequence)

20 5'-

ATGCTGGAGGATCCGGAACGCAACAAAGAGCGAAAGGAAGCTGAGTTGCAAGCTCAAACCGC
TGAGCAACACCATCACCATCACCATAGCGCGTGGAGCCATCCGCAGTTTGAAAAAGGCAGCG
GCGTGATGTGGCGGATGTCCGTTCCAGCAGCCGTACGCCGAGCGATAAACCTGTCGCGCA
CGTAGTGGCGAATCCGCAAGCCGAGGGTCAGCTGCAGTGGCTGAATCGTCGCGCGAACGCG
25 CTGCTGGCCAATGGTGTGAGCTGCGTGACAACCAACTGGTTGTTCCATCCGAAGGCCTGTA
CCTGATTTATTCTCAAGTGCTGTTCAAAGGTCAGGGTTGCCCCGAGCACGCACGTGTTGCTGAC
CCATACCATTAGCCGCATCGCAGTCAGCTACCAGACCAAGGTCAACCTGTTGAGCGCGATCA
AGTCCCCGTGTCAACGTGAAACGCCTGAGGGCGCTGAGGCCAAGCCGTGGTATGAGCCGAT
CTACCTGGGTGGCGTGTTCAGCTGGAGAAAGGTGACCGTCTGAGCGCGGAAATCAACCGCC
30 CGGATTATTTAGATTTTGCCGAGTCTGGTCAGGTGTACTTCGGCATTATTGCACTGTAATAA-3'

SEQ ID NO:29 (nucleotide sequence encoding fusion protein of SEQ ID NO:27, comprising T7ACnew tag sequence)

5'-

ATGCTAGAAGATCCCGAAAGGAATAAGAAAGGAAAGAAGCTGAGTTGCAAGCTCAAACCGCT
5 GAGCAACACCATCACCATCACCATAGCGCGTGGAGCCATCCGCAGTTTAAAAAGGCAGCGG
CGTGGATGTGGCGGATGTCCGTTCCAGCAGCCGTACGCCGAGCGATAAACCTGTCGCGCAC
GTAGTGGCGAATCCGCAAGCCGAGGGTCAGCTGCAGTGGCTGAATCGTCGCGCGAACGCGC
TGCTGGCCAATGGTGTTGAGCTGCGTGACAACCAACTGGTTGTTCCATCCGAAGGCCTGTAC
CTGATTTATTCTCAAGTGCTGTTCAAAGGTCAGGGTTGCCCCGAGCACGCACGTGTTGCTGACC
10 CATACCATTAGCCGCATCGCAGTCAGCTACCAGACCAAGGTCAACCTGTTGAGCGCGATCAA
GTCCCCGTGTCAACGTGAAACGCCTGAGGGCGCTGAGGCCAAGCCGTGGTATGAGCCGATC
TACCTGGGTGGCGTGTTTCAGCTGGAGAAAGGTGACCGTCTGAGCGCGGAAATCAACCGCCC
GGATTATTTAGATTTTGCCGAGTCTGGTCAGGTGTACTTCGGCATTATTGCACTGTAATAA-3'

15 SEQ ID NO:30 (amino acid sequence of hFGF2)

AAGSITTLPALPEDGGSGAFPPGHFKDPKRLYCKNGGFFLRIHPDGRVDGVREKSDPHIKLQLQAE
ERGVVSIKGVSANRYLAMKEDGRLLASKSVTDECFFFERLESNNYNTYRSRKYTSWYVALKRTGQ
YKLGSKTGPGQKAILFLPMSAKS

20 SEQ ID NO:31 (nucleotide sequence of hFGF2)

5'-

GCCGCTGGTTCGATTACTACCCTGCCTGCTTTACCTGAAGATGGTGGTTCTGGTGCCTTCCCC
CCGGGTCACTTCAAAGACCCAAAACGTTTGTACTGTAAAAACGGTGGCTTTTTTCTGCGCATC
CATCCGGACGGCCGCGTGATGGTGTCCGTGAAAAGTCCGACCCGCACATTAAGCTGCAACT
25 GCAGGCCGAGGAGCGTGGTGTTGTTAGCATCAAAGGCGTGAGCGCAAATCGTTACCTGGCG
ATGAAAGAGGATGGCCGTCTGCTGGCGAGCAAGAGCGTTACCGACGAGTGCTTCTTCTTTGA
ACGCCTGGAGAGCAATAATTACAACACCTACCGTAGCCGCAAGTATACCTCTTGGTATGTGGC
GCTGAAGCGTACGGGCCAGTATAAATTGGGTAGCAAAACGGGTCCGGGCCAAAAGGCAATCC
TGTTCTGCCGATGAGCGCGAAATCCTAA-3'

30

SEQ ID NO:32 (amino acid sequence of fusion protein comprising CASPON tag and hFGF2)

MLEDPERNKERKEAELQAQTAEQHSHHHHSAWSPQFEKSGVDVADAAGSITTLPALPEDGGS
GAFPPGHFKDPKRLYCKNGGFFLRIHPDGRVDGVREKSDPHIKLQLQAEERGVVSIKGVSANRYL
AMKEDGRLLASKSVTDECFFFERLESNNYNTYRSRKYTSWYVALKRTGQYKLGSKTGPGQKAILF
35 LPMSAKS

SEQ ID NO:33 (nucleotide sequence encoding fusion protein of SEQ ID NO:32, comprising T7AC tag sequence)

5'-

ATGCTGGAGGATCCGGAACGCAACAAAGAGCGAAAGGAAGCTGAGTTGCAAGCTCAAACCGC
5 TGAGCAACACCATCATCACCATCATAGCGCGTGGAGCCATCCGCAGTTTGAAAAAGGCAGCG
GCGTGGATGTGGCGGATGCCGCTGGTTCGATTACTACCCTGCCTGCTTTACCTGAAGATGGT
GGTTCTGGTGCCTTCCCGCCGGGTCACTTCAAAGACCCAAAACGTTTGACTGTAAAAACGGT
GGCTTTTTTCTGCGCATCCATCCGGACGGCCGCGTGGATGGTGTCCGTGAAAAGTCCGACCC
GCACATTAAGCTGCAACTGCAGGCCGAGGAGCGTGGTGTGTTAGCATCAAAGGCGTGAGCG
10 CAAATCGTTACCTGGCGATGAAAGAGGATGGCCGTCTGCTGGCGAGCAAGAGCGTTACCGAC
GAGTGCTTCTTCTTTGAACGCCTGGAGAGCAATAATTACAACACCTACCGTAGCCGCAAGTAT
ACCTCTTGGTATGTGGCGCTGAAAGCGTACGGGCCAGTATAAATTGGGTAGCAAACGGGTCC
GGGCCAAAAGGCAATCCTGTTCTGCCGATGAGCGCGAAATCCTAA-3'

15 SEQ ID NO:34 (nucleotide sequence encoding fusion protein of SEQ ID NO:32, comprising T7ACnew tag sequence)

5'-

ATGCTAGAAGATCCCGAAAGGAATAAAGAAAGGAAAGAAGCTGAGTTGCAAGCTCAAACCGCT
GAGCAACACCATCATCACCATCATAGCGCGTGGAGCCATCCGCAGTTTGAAAAAGGCAGCGG
20 CGTGGATGTGGCGGATGCCGCTGGTTCGATTACTACCCTGCCTGCTTTACCTGAAGATGGTG
GTTCTGGTGCCTTCCCGCCGGGTCACTTCAAAGACCCAAAACGTTTGACTGTAAAAACGGTG
GCTTTTTTCTGCGCATCCATCCGGACGGCCGCGTGGATGGTGTCCGTGAAAAGTCCGACCCG
CACATTAAGCTGCAACTGCAGGCCGAGGAGCGTGGTGTGTTAGCATCAAAGGCGTGAGCGC
AAATCGTTACCTGGCGATGAAAGAGGATGGCCGTCTGCTGGCGAGCAAGAGCGTTACCGACG
25 AGTGCTTCTTCTTTGAACGCCTGGAGAGCAATAATTACAACACCTACCGTAGCCGCAAGTATA
CCTCTTGGTATGTGGCGCTGAAAGCGTACGGGCCAGTATAAATTGGGTAGCAAACGGGTCCG
GGCCAAAAGGCAATCCTGTTCTGCCGATGAGCGCGAAATCCTAA-3'

SEQ ID NO:35 (amino acid sequence of PTH)

30 SVSEIQLMHNLGKHLNSMERVEWLRKKLQDVHNFVALGAPLAPRDAGSQRPRKKEDNVLVESHE
KSLGEADKADVNLTKAKSQ

SEQ ID NO:36 (nucleotide sequence of PTH)

5'-

35 AGCGTTAGCGAAATTCAGCTGATGCATAATCTGGGCAAACATCTGAATAGCATGGAACGTGTT
GAATGGCTGCGTAAAAAACTGCAGGATGTGCATAATTTTGTGCACTGGGTGCACCGCTGGCA
CCGCGTGATGCAGGTAGTCAGCGTCCTCGTAAAAAAGAAGATAACGTTCTGGTTGAAAGCCA
CGAAAAAAGCCTGGGTGAAGCAGATAAAGCAGATGTTAATGTTCTGACCAAAGCCAAAAGCCA
GTAATAA-3'

40

SEQ ID NO:37 (amino acid sequence of fusion protein comprising CASPON tag and PTH)
 MLEDPERNKERKEAELQAQTAEQHHHHHSAWSHPQFEKSGVDVADSVSEIQLMHNLGKHLN
 SMERVEWLRKKLQDVHNFVALGAPLAPRDAGSQRPRKKEDNVLVESHEKSLGEADKADVNLTK
 AKSQ

5

SEQ ID NO:38 (nucleotide sequence encoding fusion protein of SEQ ID NO:37, comprising T7AC tag sequence and PTH)

5'-

ATGCTGGAGGATCCGGAACGCAACAAAGAGCGAAAGGAAGCTGAGTTGCAAGCTCAAACCGC
 10 TGAGCAACACCATCACCATCACCATAGCGCGTGGAGCCATCCGCAGTTTAAAAAGGCAGCG
 GCGTGGATGTGGCGGATAGCGTTAGCGAAATTCAGCTGATGCATAATCTGGGCAAACATCTG
 AATAGCATGGAACGTGTTGAATGGCTGCGTAAAAAACTGCAGGATGTGCATAATTTGTTGCA
 CTGGGTGCACCGCTGGCACCGCGTGATGCAGGTAGTCAGCGTCCTCGTAAAAAAGAAGATAA
 CGTTCTGGTTGAAAGCCACGAAAAAAGCCTGGGTGAAGCAGATAAAGCAGATGTTAATGTTCT
 15 GACCAAAGCCAAAAGCCAGTAATAA-3'

SEQ ID NO:39 (nucleotide sequence encoding fusion protein of SEQ ID NO:37, comprising T7ACnew tag sequence and PTH)

5'-

ATGCTAGAAGATCCCGAAAGGAATAAAGAAAGGAAAGAAGCTGAGTTGCAAGCTCAAACCGCT
 20 GAGCAACACCATCACCATCACCATAGCGCGTGGAGCCATCCGCAGTTTAAAAAGGCAGCGG
 CGTGGATGTGGCGGATAGCGTTAGCGAAATTCAGCTGATGCATAATCTGGGCAAACATCTGAA
 TAGCATGGAACGTGTTGAATGGCTGCGTAAAAAACTGCAGGATGTGCATAATTTTGTGCACT
 GGGTGCACCGCTGGCACCGCGTGATGCAGGTAGTCAGCGTCCTCGTAAAAAAGAAGATAACG
 25 TTCTGGTTGAAAGCCACGAAAAAAGCCTGGGTGAAGCAGATAAAGCAGATGTTAATGTTCTGA
 CCAAAGCCAAAAGCCAGTAATAA-3'

SEQ ID NO:40 (amino acid sequence of CASPON tag: including T7AC tag, **6-His tag**, *SA linker*, Strep II tag, *GSG linker* and **caspase 2 recognition and cleavage site**)

30 MLEDPERNKERKEAELQAQTAEQHHHHHSAWSHPQFEKSGVDVAD

SEQ ID NO: 41 (nucleotide sequence encoding the tag of SEQ ID NO:37, comprising T7AC tag sequence)

5'- ATGCTGGAGGATCCGGAACGCAACAAAGAGCGAAAGGAAGCTGAGTTGGAAGCTGAGAC-
 35 CGCTGAGCAACACCATCATCACCATCATAGCGCGTGGAGCCATCCGCAGTTTAAAAAGGCA
 GCGGCGTGGATGTGGCGGAT-3'

SEQ ID NO:42 (nucleotide sequence encoding the tag of SEQ ID NO:37, comprising T7ACnew tag sequence)

5'-

ATGCTAGAAGATCCCGAAAGGAATAAAGAAAGGAAAGAAGCTGAGTTGCAAGCTCAAACCGCT
5 GAGCAACACCATCATCACCATCATAGCGCGTGGAGCCATCCGCAGTTTGAAAAAGGCAGCGG
CGTGGATGTGGCGGAT-3'

SEQ ID NO:43 (mRNA sequence of part of T7AC (-17 to +39 bp))

5'-AAGAAGGAGAUUAUACAUAUGCUGGAGGAUCCGGAACGCAACAAAGAGCGAAAGGAA-3'

10

SEQ ID NO:44 (mRNA sequence of part of T7ACnew (-17 to +39 bp))

5'-AAGAAGGAGAUUAUACAUAUGCUGAAGAUAUCCGAAAGGAAUAAAGAAAGGAAAGAA-3'

SEQ ID NO: 45 (P1 – SEQ-MCS-for)

15 5'- GAAGCAGCCCAGTAGTAG -3'

SEQ ID NO: 46 (P2 – SEQ MCS-rev)

5'- CGGATATAGTTCCTCCTTTCAG -3'

20 SEQ ID NO: 47 (P3 – T7AC-NEW-for)

5'- GGTCTCAGAAAGGAATAAAGAAAGGAAAGAAGCTGAGTTGCAAG -3'

SEQ ID NO: 48 (T/AC-NEW-rev)

5'- GGTCTCTTTTCGGGATCTTCTAGCATATGTATATCTCCTTC -3'

25

SEQ ID: 49

VDVAD

SEQ ID NO:50 (DBv1)

30 PLV

SEQ ID NO:51 (DBv2)

PHS

35 SEQ ID NO:52 (DBv1-T7AC)

PLVPERNKERKEAELQAQTAEQ

SEQ ID NO:53 (DBv2-T7AC)

PHSPERNKERKEAELQAQTAEQ

40

SEQ ID NO:54 (DBv1-T7AC)

5'- CCC TTG GTC CCG GAA CGC AAC AAA GAG CGA AAG GAA GCT GAG TTG CAA GCT CAA
ACC GCT GAG CAA -3'

5 SEQ ID NO:55 (DBv1-T7ACnew)

5'- CCC TTG GTC CCC GAA AGG AAT AAA GAA AGG AAA GAA GCT GAG TTG CAA GCT CAA
ACC GCT GAG CAA -3'

SEQ ID NO:56 (DBv2-T7AC)

10 5'- CCA CAC AGC CCG GAA CGC AAC AAA GAG CGA AAG GAA GCT GAG TTG CAA GCT CAA
ACC GCT GAG CAA -3'

SEQ ID NO:57 (DBv2-T7ACnew)

15 5'- CCA CAC AGC CCC GAA AGG AAT AAA GAA AGG AAA GAA GCT GAG TTG CAA GCT CAA
ACC GCT GAG CAA -3'

SEQ ID NO:58 (amino acid sequence of fusion protein comprising DBv1 and PTH)

MPLVPERNKERKEAELQAQTAEQHSHHHHSAWSHPQFEKSGVDVADSVSEIQLMHNLGKHLN
SMERVEWLRKKLQDVHNFVALGAPLAPRDAGSQRPRKKEDNVLVESHEKSLGEADKADVNVLTK
20 AKSQ

SEQ ID NO:59 (nucleotide sequence encoding fusion protein of SEQ ID NO:58 comprising the DBv1-
T7AC tag)

5'-

25 ATGCCCTTGGTCCCGGAACGCAACAAAGAGCGAAAGGAAGCTGAGTTGCAAGCTCAAACCGC
TGAGCAACACCATCATCACCATCATAGCGCGTGGAGCCATCCGCAGTTTGAAAAAGGCAGCG
GCGTGGATGTGGCGGATAGCGTTAGCGAAATTCAGCTGATGCATAATCTGGGCAAACATCTG
AATAGCATGGAACGTGTTGAATGGCTGCGTAAAAAACTGCAGGATGTGCATAATTTTGTGCA
CTGGGTGCACCGCTGGCACCGCGTGATGCAGGTAGTCAGCGTCCTCGTAAAAAAGAAGATAA
30 CGTTCTGGTTGAAAGCCACGAAAAAAGCCTGGGTGAAGCAGATAAAGCAGATGTTAATGTTCT
GACCAAAGCCAAAAGCCAGTAATAA -3'

SEQ ID NO: 60 (nucleotide sequence encoding fusion protein of SEQ ID NO:58 comprising the DBv1-T7ACnew tag)

5'-

ATGCCCTTGGTCCCCGAAAGGAATAAAGAAAGGAAAGAAGCTGAGTTGCAAGCTCAAACCGC
5 TGAGCAACACCATCATCACCATCATAGCGCGTGGAGCCATCCGCAGTTTGAAAAAGGCAGCG
GCGTGGATGTGGCGGATAGCGTTAGCGAAATTCAGCTGATGCATAATCTGGGCAAACATCTG
AATAGCATGGAACGTGTTGAATGGCTGCGTAAAAAACTGCAGGATGTGCATAATTTTGTGCA
CTGGGTGCACCGCTGGCACC GCGTGATGCAGGTAGTCAGCGTCCTCGTAAAAAAGAAGATAA
CGTTCTGGTTGAAAGCCACGAAAAAAGCCTGGGTGAAGCAGATAAAGCAGATGTTAATGTTCT
10 GACCAAAGCCAAAAGCCAGTAATAA -3'

SEQ ID NO:61 (amino acid sequence of fusion protein comprising DBv2 and PTH)

MPHSPERNKERKEAELQAQTAEQH HHHHHSWSHPQFEKSGVDVADSVSEIQLMHN LGKHLN
SMERVEWLRKKLQDVHNFVALGAPLAPRDAGSQRPRKKEDNVLVESHEKSLGEADKADVNLTK
15 AKSQ

SEQ ID NO:62 (nucleotide sequence encoding fusion protein of SEQ ID NO:61 comprising the DBv2-T7AC tag)

5'-

ATGCCACACAGCCCGGAACGCAACAAAGAGCGAAAGGAAGCTGAGTTGCAAGCTCAAACCGC
20 TGAGCAACACCATCATCACCATCATAGCGCGTGGAGCCATCCGCAGTTTGAAAAAGGCAGCG
GCGTGGATGTGGCGGATAGCGTTAGCGAAATTCAGCTGATGCATAATCTGGGCAAACATCTG
AATAGCATGGAACGTGTTGAATGGCTGCGTAAAAAACTGCAGGATGTGCATAATTTTGTGCA
CTGGGTGCACCGCTGGCACC GCGTGATGCAGGTAGTCAGCGTCCTCGTAAAAAAGAAGATAA
25 CGTTCTGGTTGAAAGCCACGAAAAAAGCCTGGGTGAAGCAGATAAAGCAGATGTTAATGTTCT
GACCAAAGCCAAAAGCCAGTAATAA -3'

SEQ ID NO:63 (nucleotide sequence encoding fusion protein of SEQ ID NO:61 comprising the DBv2-T7ACnew tag)

5'-

ATGCCACACAGCCCCGAAAGGAATAAAGAAAGGAAAGAAGCTGAGTTGCAAGCTCAAACCGC
30 TGAGCAACACCATCATCACCATCATAGCGCGTGGAGCCATCCGCAGTTTGAAAAAGGCAGCG
GCGTGGATGTGGCGGATAGCGTTAGCGAAATTCAGCTGATGCATAATCTGGGCAAACATCTG
AATAGCATGGAACGTGTTGAATGGCTGCGTAAAAAACTGCAGGATGTGCATAATTTTGTGCA
35 CTGGGTGCACCGCTGGCACC GCGTGATGCAGGTAGTCAGCGTCCTCGTAAAAAAGAAGATAA
CGTTCTGGTTGAAAGCCACGAAAAAAGCCTGGGTGAAGCAGATAAAGCAGATGTTAATGTTCT
GACCAAAGCCAAAAGCCAGTAATAA -3'

SEQ ID NO:64 (amino acid sequence of fusion protein comprising DBv2 and hFGF2)

MPHSPERNKERKEAELQAQTAEQHSHHHHSAWSHPQFEKSGSGVDVADAAGSITTLPALPEDGG
SGAFPPGHFKDPKRLYCKNGGFFLRHPDGRVDGVRKSDPHIKLQLQAEERGVSIGKVSANRY
LAMKEDGRLLASKSVTDECFERLESNNYNTYRSRKYTSWYVALKRTGQYKLGSKTGPQGKAIL
5 FLPMSAKS

SEQ ID NO:65 (nucleotide sequence encoding fusion protein of SEQ ID NO:64 comprising the DBv2-
T7AC tag)

5'-

10 ATGCCACACAGCCCGGAACGCAACAAAGAGCGAAAGGAAGCTGAGTTGCAAGCTCAAACCGC
TGAGCAACACCATCATCACCATCATAGCGCGTGGAGCCATCCGCAGTTTGAAAAAGGCAGCG
GCGTGATGTGGCGGATGCCGCTGGTTCGATTACTACCCTGCCTGCTTTACCTGAAGATGGT
GGTTCTGGTGCGTTCCCGCCGGGTCACTTCAAAGACCCAAAACGTTTGTACTGTAAAAACGGT
GGCTTTTTTCTGCGCATCCATCCGGACGGCCGCGTGGATGGTGTCCGTGAAAAGTCCGACCC
15 GCACATTAAGCTGCAACTGCAGGCCGAGGAGCGTGGTGTGTTAGCATCAAAGGCGTGAGCG
CAAATCGTTACCTGGCGATGAAAGAGGATGGCCGTCTGCTGGCGAGCAAGAGCGTTACCGAC
GAGTGCTTCTTCTTTGAACGCCTGGAGAGCAATAATTACAACACCTACCGTAGCCGCAAGTAT
ACCTCTTGGTATGTGGCGCTGAAGCGTACGGGCCAGTATAAATTGGGTAGCAAAACGGGTCC
GGGCCAAAAGGCAATCCTGTTCTGCGCATGAGCGCGAAATCCTAA -3'

20

SEQ ID NO:66 (nucleotide sequence encoding fusion protein of SEQ ID NO:64 comprising the DBv2-
T7ACnew tag)

5'-

ATGCCACACAGCCCGAAAGGAATAAAGAAAGGAAAGAAAGCTGAGTTGCAAGCTCAAACCGC
25 TGAGCAACACCATCATCACCATCATAGCGCGTGGAGCCATCCGCAGTTTGAAAAAGGCAGCG
GCGTGATGTGGCGGATGCCGCTGGTTCGATTACTACCCTGCCTGCTTTACCTGAAGATGGT
GGTTCTGGTGCGTTCCCGCCGGGTCACTTCAAAGACCCAAAACGTTTGTACTGTAAAAACGGT
GGCTTTTTTCTGCGCATCCATCCGGACGGCCGCGTGGATGGTGTCCGTGAAAAGTCCGACCC
GCACATTAAGCTGCAACTGCAGGCCGAGGAGCGTGGTGTGTTAGCATCAAAGGCGTGAGCG
30 CAAATCGTTACCTGGCGATGAAAGAGGATGGCCGTCTGCTGGCGAGCAAGAGCGTTACCGAC
GAGTGCTTCTTCTTTGAACGCCTGGAGAGCAATAATTACAACACCTACCGTAGCCGCAAGTAT
ACCTCTTGGTATGTGGCGCTGAAGCGTACGGGCCAGTATAAATTGGGTAGCAAAACGGGTCC
GGGCCAAAAGGCAATCCTGTTCTGCGCATGAGCGCGAAATCCTAA -3'

35 SEQ ID NO:67: P5

5'- GGTCTCTAGGGCATATGTATATCTCCTTCTTAAAGTTA -3'

SEQ ID NO:68: P6

5'- GGTCTCACCTTGGTCCCGGAACGCAACAAAG -3'

40

SEQ ID NO:69: P7

5'- GGTCTCTGTGGCATATGTATATCTCCTTCTTAAAGTTA -3'

SEQ ID NO:70: P8

5 5'- GGTCTCACCACACAGCCCGGAACGCAACAAAG -3'

SEQ ID NO:71: P9

5'- GGTCTCTTTTCGGGGACCAAGGGCATATG -3'

10 SEQ ID NO:72 P10

5'- GGTCTCTTTTCGGGGCTGTGTGGCATAT -3'

SEQ ID NO: 73 (amino acid sequence of T7AC-6H-GSG-VDVAD - PTH)

15 MLEDPERNKERKEAELQAQTAEQH HHHHHHSGVDVADSVSEIQLMHNLGKHLNSMERVEWLRK
KLQDVHNFVALGAPLAPRDAGSQRPRKKEDNVLVESHEKSLGEADKADVNVLTAKASQ

SEQ ID NO: 74 (nucleic acid sequence of T7AC-6H-GSG-VDVAD - PTH)

5'-

20 ATGCTGGAGGATCCGGAACGCAACAAAGAGCGAAAGGAAGCTGAGTTGCAAGCTCAAACCGC
TGAGCAACACCATCACCATCACCATGGCAGCGGCGTGGATGTGGCGGATAGCGTTAGCGAAA
TTCAGCTGATGCATAATCTGGGCAAACATCTGAATAGCATGGAACGTGTTGAATGGCTGCGTA
AAAACTGCAGGATGTGCATAATTTTGTGCACTGGGTGCACCGCTGGCACCGCGTGATGCA
GGTAGTCAGCGTCCTCGTAAAAAAGAAGATAACGTTCTGGTTGAAAGCCACGAAAAAAGCCTG
GGTGAAGCAGATAAAGCAGATGTTAATGTTCTGACCAAAGCCAAAAGCCAGTAATAA -3'

25

SEQ ID NO: 75 (nucleic acid sequence of T7ACnew-alt.2-6H-GSG-VDVAD - PTH)

5'-

30 ATGTTGGAAGATCCAGAACGAAATAAAGAAAAGAAAGCTGAGTTGCAAGCTCAAACCGCT
GAGCAACACCATCACCATCACCATGGCAGCGGCGTGGATGTGGCGGATAGCGTTAGCGAAAT
TCAGCTGATGCATAATCTGGGCAAACATCTGAATAGCATGGAACGTGTTGAATGGCTGCGTAA
AAACTGCAGGATGTGCATAATTTTGTGCACTGGGTGCACCGCTGGCACCGCGTGATGCAG
GTAGTCAGCGTCCTCGTAAAAAAGAAGATAACGTTCTGGTTGAAAGCCACGAAAAAAGCCTGG
GTGAAGCAGATAAAGCAGATGTTAATGTTCTGACCAAAGCCAAAAGCCAGTAATAA -3'

35 SEQ ID NO: 76 (amino acid sequence of T7AC-6H-GSG-VDVAD - TNF α)

MLEDPERNKERKEAELQAQTAEQH HHHHHHSGVDVADVRSRTPSDKPVAVHVANPQAEQQL
QWLNRRANALLANGVELRDNQLVVPSEGLYLIYSQVLFKGQGCPSTHVLLTHTISRIAVSYQTKVN
LLSAIKSPCQRETPEGAEAKPWYEPIYLGGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIAL

SEQ ID NO: 77 (nucleic acid sequence of T7AC-6H-GSG-VDVAD - TNF α)

5'-

ATGCTGGAGGATCCGGAACGCAACAAAGAGCGAAAGGAAGCTGAGTTGCAAGCTCAAACCGC
TGAGCAACACCATCACCATCACCATGGCAGCGGCGTGGATGTGGCGGATGTCCGTTCCAGCA
5 GCCGTACGCCGAGCGATAAACCTGTCGCGCACGTAGTGGCGAATCCGCAAGCCGAGGGTCA
GCTGCAGTGGCTGAATCGTCGCGCAACGCGCTGCTGGCCAATGGTGTGAGCTGCGTGAC
AACCAACTGGTTGTTCCATCCGAAGGCCTGTACCTGATTTATTCTCAAGTGCTGTTCAAAGGTC
AGGGTTGCCCGAGCACGCACGTGTTGCTGACCCATACCATTAGCCGCATCGCAGTCAGCTAC
CAGACCAAGGTCAACCTGTTGAGCGCGATCAAGTCCCCGTGTCAACGTGAAACGCCTGAGGG
10 CGCTGAGGCCAAGCCGTGGTATGAGCCGATCTACCTGGGTGGCGTGTTTCAGCTGGAGAAA
GGTGACCGTCTGAGCGCGGAAATCAACCGCCCGGATTATTTAGATTTTGCCGAGTCTGGTCA
GGTGTACTTCGGCATTATTGCACTGTAATAA -3'

SEQ ID NO: 78 (nucleic acid sequence of T7ACnew-6H-GSG-VDVAD - TNF α)

5'-

15 ATGCTAGAAGATCCCGAAAGGAATAAAGAAAGGAAAGAAGCTGAGTTGCAAGCTCAAACCGCT
GAGCAACACCATCACCATCACCATGGCAGCGGCGTGGATGTGGCGGATGTCCGTTCCAGCA
GCCGTACGCCGAGCGATAAACCTGTCGCGCACGTAGTGGCGAATCCGCAAGCCGAGGGTCA
GCTGCAGTGGCTGAATCGTCGCGCAACGCGCTGCTGGCCAATGGTGTGAGCTGCGTGAC
20 AACCAACTGGTTGTTCCATCCGAAGGCCTGTACCTGATTTATTCTCAAGTGCTGTTCAAAGGTC
AGGGTTGCCCGAGCACGCACGTGTTGCTGACCCATACCATTAGCCGCATCGCAGTCAGCTAC
CAGACCAAGGTCAACCTGTTGAGCGCGATCAAGTCCCCGTGTCAACGTGAAACGCCTGAGGG
CGCTGAGGCCAAGCCGTGGTATGAGCCGATCTACCTGGGTGGCGTGTTTCAGCTGGAGAAA
GGTGACCGTCTGAGCGCGGAAATCAACCGCCCGGATTATTTAGATTTTGCCGAGTCTGGTCA
25 GGTGTACTTCGGCATTATTGCACTGTAATAA -3'

SEQ ID NO: 79 (nucleic acid sequence of T7ACnew-alt.1-6H-GSG-VDVAD - TNF α)

5'-

ATGTTAGAAGATCCAGAAAGAAATAAAGAAAGAAAAGAAGCTGAGTTGCAAGCTCAAACCGCT
30 GAGCAACACCATCACCATCACCATGGCAGCGGCGTGGATGTGGCGGATGTCCGTTCCAGCA
GCCGTACGCCGAGCGATAAACCTGTCGCGCACGTAGTGGCGAATCCGCAAGCCGAGGGTCA
GCTGCAGTGGCTGAATCGTCGCGCAACGCGCTGCTGGCCAATGGTGTGAGCTGCGTGAC
AACCAACTGGTTGTTCCATCCGAAGGCCTGTACCTGATTTATTCTCAAGTGCTGTTCAAAGGTC
AGGGTTGCCCGAGCACGCACGTGTTGCTGACCCATACCATTAGCCGCATCGCAGTCAGCTAC
35 CAGACCAAGGTCAACCTGTTGAGCGCGATCAAGTCCCCGTGTCAACGTGAAACGCCTGAGGG
CGCTGAGGCCAAGCCGTGGTATGAGCCGATCTACCTGGGTGGCGTGTTTCAGCTGGAGAAA
GGTGACCGTCTGAGCGCGGAAATCAACCGCCCGGATTATTTAGATTTTGCCGAGTCTGGTCA
GGTGTACTTCGGCATTATTGCACTGTAATAA -3'

SEQ ID NO: 80 (nucleic acid sequence of T7ACnew-alt.2-6H-GSG-VDVAD - TNF α)

5'-

ATGTTGGAAGATCCAGAACGAAATAAAGAAAGAAAAGAAGCTGAGTTGCAAGCTCAAACCGCT
GAGCAACACCATCACCATCACCATGGCAGCGGCGTGGATGTGGCGGATGTCCGTTCCAGCA
5 GCCGTACGCCGAGCGATAAACCTGTCGCGCACGTAGTGGCGAATCCGCAAGCCGAGGGTCA
GCTGCAGTGGCTGAATCGTCGCGCAACGCGCTGCTGGCCAATGGTGTGAGCTGCGTGAC
AACCAACTGGTTGTTCCATCCGAAGGCCTGTACCTGATTTATTCTCAAGTGCTGTTCAAAGGTC
AGGGTTGCCCCGAGCACGCACGTGTTGCTGACCCATACCATTAGCCGCATCGCAGTCAGCTAC
CAGACCAAGGTCAACCTGTTGAGCGCGATCAAGTCCCCGTGTCAACGTGAAACGCCTGAGGG
10 CGCTGAGGCCAAGCCGTGGTATGAGCCGATCTACCTGGGTGGCGTGTTCAGCTGGAGAAA
GGTGACCGTCTGAGCGCGGAAATCAACCGCCCGGATTATTTAGATTTTGCCGAGTCTGGTCA
GGTGTACTTCGGCATTATTGCACTGTAATAA -3'