Figure 1:

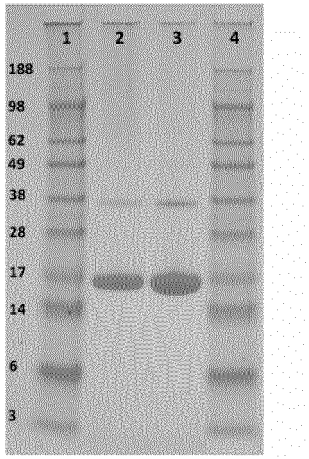
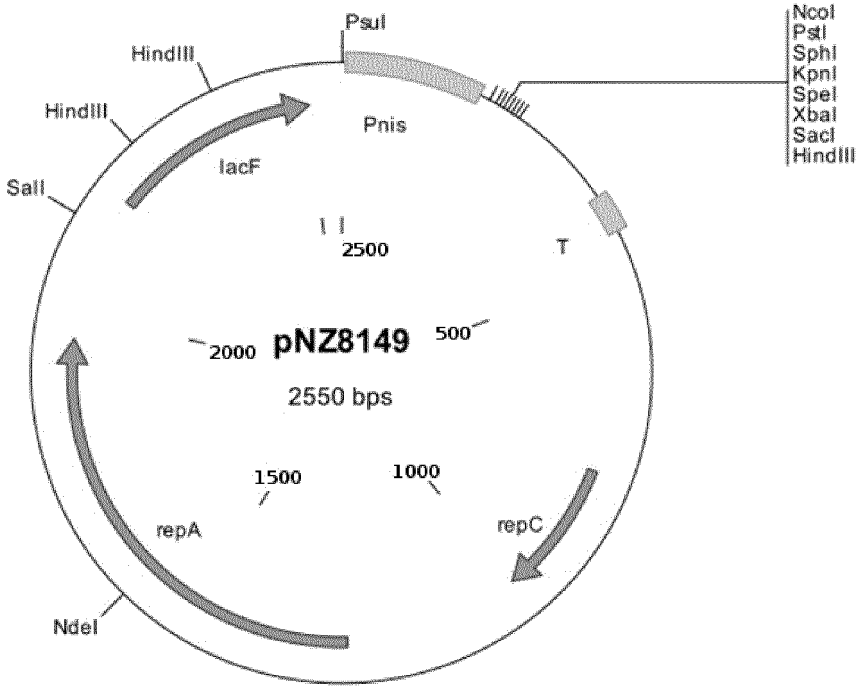


Figure 2:




```
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gctctgatta aattctgaag tttgttagat acaatgattt cgttcgaagg aactacaaaa     180
taaattataa ggaggcactc accatgggta ctgcaggcat gcggtaccac tagttctaga     240
gagctcaagc tttctttgaa ccaaaattag aaaaccaagg cttgaaacgt tcaattgaaa     300
tggcaattaa acaaattaca gcacgtgttg ctttgattga tagccaaaaa gcagcagttg     360
ataaagcaat tactgatatt gctgaaaaat tgtaatttat aaataaaaat caccttttag     420
aggtggtttt tttatttata aattattcgt ttgatttcgc tttcgataga acaatcaaat     480
cgtttctgag acgttttagc gtttatttcg tttagttatc ggcataatcg ttaaaacagg     540
cgttatcgta gcgtaaaagc ccttgagcgt agcgtggctt tgcagcgaag atgttgtctg     600
ttagattatg aaagccgatg actgaatgaa ataataagcg cagcgtcctt ctatttcggt     660
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ccgagtgcca atttttgtgc caaaaacgct ctatcccaac tggctcaagg gtttgagggg     900
tttttcaatc gccaacgaat cgccaacgtt ttcgccaacg ttttttataa atctatattt     960
aagtagcttt atttttgttt ttatgattac aaagtgatac actaatttta taaaattatt    1020
tgattggagt tttttaaatg gtgatttcag aatcgaaaaa aagagttatg atttctctga    1080
caaaagagca agataaaaaa ttaacagata tggcgaaaca aaaagatttt tcaaaatctg    1140
```

```
cggttgcggc gttagctata gaagaatatg caagaaagga atcagaacaa aaaaaataag    1200
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atatcatggc tattaaaaat actaaagcta gaaattttgg atttttatta tatcctgact    1320
caattcctaa tgattggaaa gaaaaattag agagtttggg cgtatctatg gctgtcagtc    1380
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gccttagggg agcggagttt ggaattttaa atacgaatga tgtaaaagat attgtttcaa    1860
caaactctag cgcctttaga ttatggtttg agggcaatta tcagtgtgga tatagagcaa    1920
gttatgcaaa ggttcttgat gctgaaacgg gggaaataaa atgacaaaca aagaaaaaga    1980
gttatttgct gaaaatgagg aattaaaaaa agaaattaag gacttaaaag agcgtattga    2040
aagatacaga gaaatggaag ttgaattaag tacaacaata gatttattga gaggagggat    2100
tattgaataa ataaaagccc ccctgacgaa agtcgacatg gactgataaa gtatagtaaa    2160
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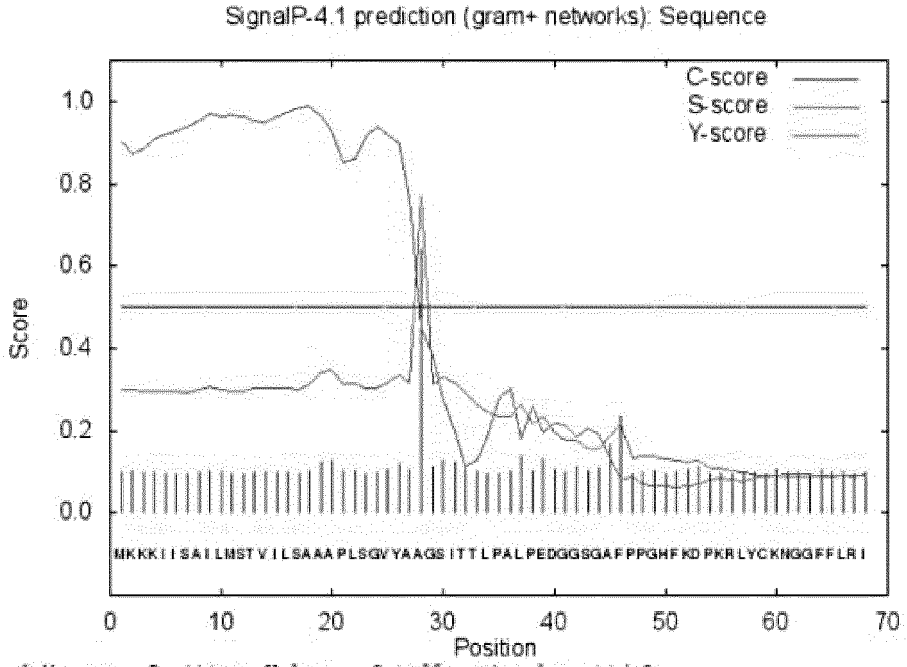
Figure 3:

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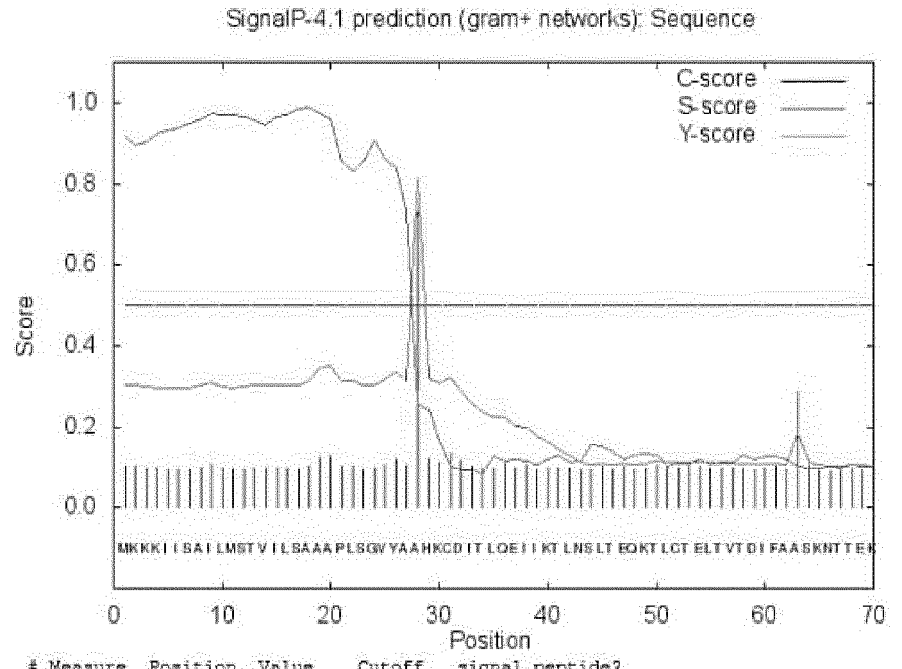
 141  tagatacaat gatttcgttc gaaggaacta caaaataaat tataaggagg cactcacc
      -10 >>..>>
                  Start >
                                                  >>RBS>>
```

Figure 4a:




```
# Measure  Position  Value    Cutoff   signal peptide?
  max. C    28        0.639
  max. Y    28        0.768
  max. S    18        0.988
  mean S     1-27     0.927
       D     1-27     0.855   0.570    YES
Name=Sequence    SP='YES' Cleavage site between pos. 27 and 28: VYA-AG
   D=0.855 D-cutoff=0.570 Networks=SignalP-noTM
```

Figure 4b:




```
# Measure  Position  Value    Cutoff   signal peptide?
  max. C    28        0.729
  max. Y    28        0.814
  max. S    18        0.989
  mean S     1-27     0.923
       D     1-27     0.874   0.570    YES
Name=Sequence    SP='YES' Cleavage site between pos. 27 and 28: VYA-AH
D=0.874 D-cutoff=0.570 Networks=SignalP-noTM
```

Figure 4c:

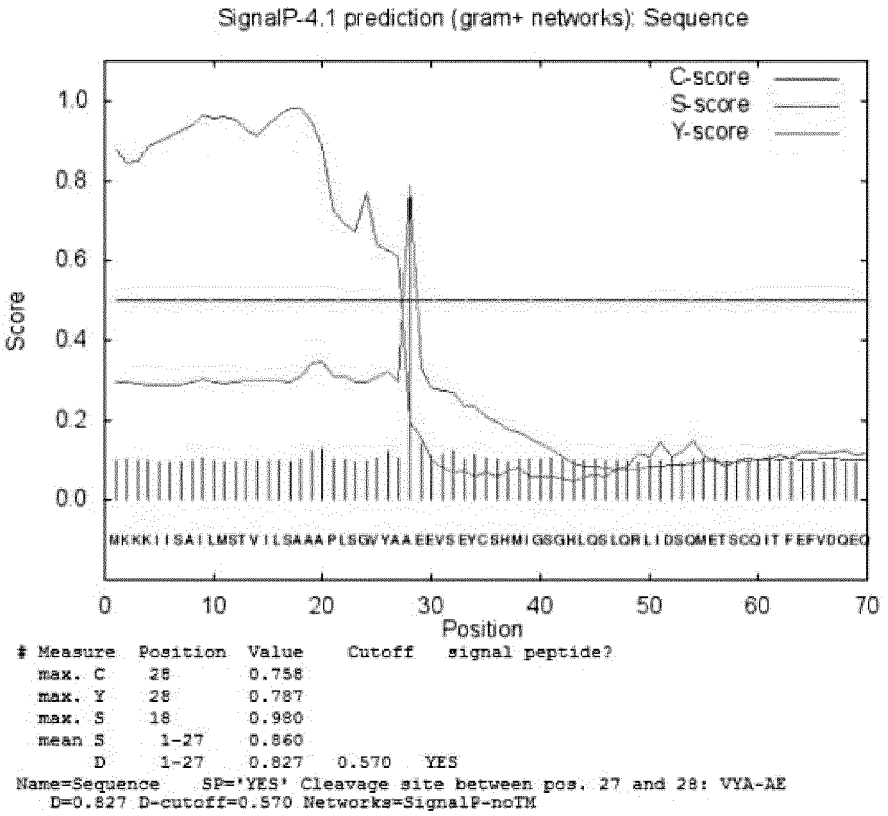
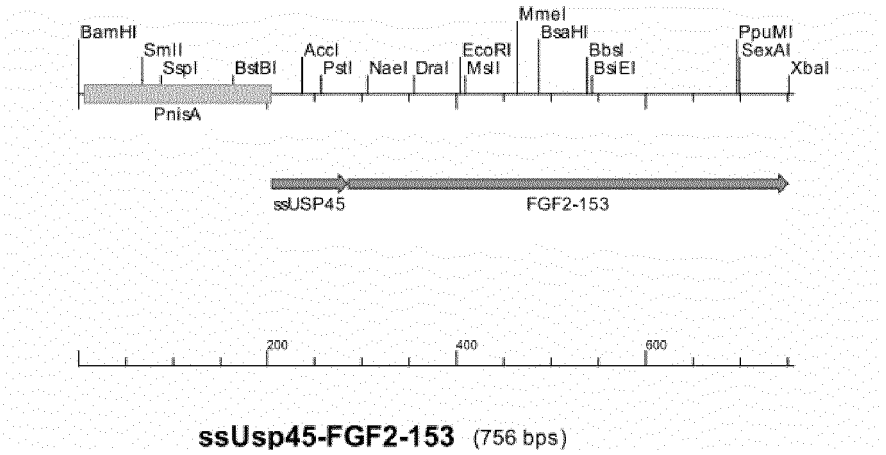


Figure 5a:



ssUsp45-FGF2-153 (756 bps)

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 61 ATT CTA TCT TGA GAA AGT ATT GGT AAT AAT ATT ATT GTC GAT AAC GCG AGC ATA ATA AAC  120

121 GGC TCT GAT TAA ATT CTG AAG TTT GTT AGA TAC AAT GAT TTC GTT CGA AGG AAC TAC AAA  180

                                    M   K   K   K   I   I   S   A   I   L   M   S
181 ATA AAT TAT AAG GAG GCA CTC ACC ATG AAA AAA AAG ATT ATC TCA GCT ATT TTA ATG TCT  240

    T   V   I   L   S   A   A   A   P   L   S   G   V   Y   A   A   G   S   I   T
241 ACA GTG ATA CTT TCT GCT GCA GCC CCG TTG TCA GGT GTT TAC GCT GCT GGT TCC ATT ACG  300

    T   L   P   A   L   P   E   D   G   G   S   G   A   F   P   P   G   H   F   K
301 ACC TTG CCG GCT TTA CCA GAG GAC GGA GGT TCA GGA GCC TTT CCA CCA GGG CAC TTT AAA  360

    D   P   K   R   L   Y   C   K   N   G   G   F   F   L   R   I   H   P   D   G
361 GAT CCC AAA CGT CTA TAT TGT AAA AAT GGA GGC TTC TTT CTG CGA ATT CAT CCT GAT GGA  420
```

```
     R   V   D   G   V   R   E   K   S   D   P   H   I   K   L   Q   L   Q   A   E
421 CGT GTA GAT GGT GTG CGT GAG AAA AGT GAT CCT CAT ATC AAA CTC CAA CTT CAG GCA GAA  480

     E   R   G   V   V   S   I   K   G   V   C   A   N   R   Y   L   A   M   K   E
481 GAA AGA GGC GTC GTA AGT ATA AAA GGA GTT TGC GCG AAT CGT TAC TTA GCT ATG AAA GAA  540

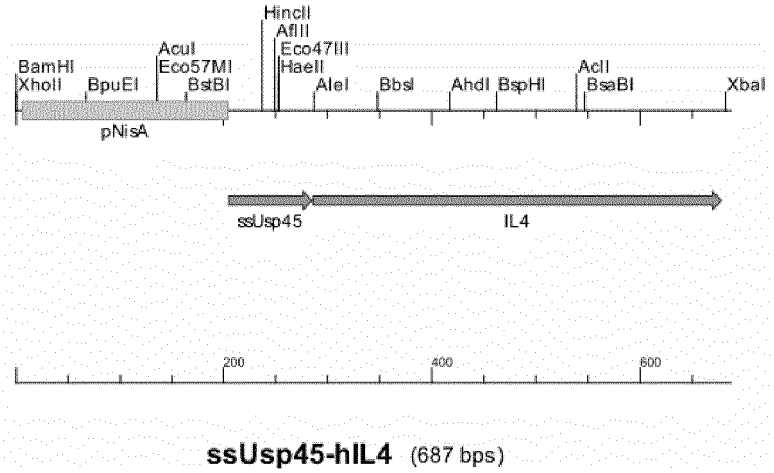
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     E   S   N   N   Y   N   T   Y   R   S   R   K   Y   T   S   W   Y   V   A   L
601 GAA TCT AAT AAT TAT AAC ACT TAT AGA AGC AGA AAA TAT ACA TCA TGG TAC GTT GCA CTT  660

     K   R   T   G   Q   Y   K   L   G   S   K   T   G   P   G   Q   K   A   I   L
661 AAA AGG ACA GGT CAA TAT AAA TTA GGG TCT AAG ACA GGA CCT GGT CAA AAA GCA ATT TTG  720

     F   L   P   M   S   A   K   S   *
721 TTC TTA CCA ATG TCG GCT AAA AGT TAA TAA TCT AGA                                  756
```

Figure 5b:



ssUsp45-hIL4 (687 bps)

```
  1 GGA TCC TAG TCT TAT AAC TAT ACT GAC AAT AGA AAC ATT AAC AAA TCT AAA ACA GTC TTA   60

 61 ATT CTA TCT TGA GAA AGT ATT GGT AAT AAT ATT ATT GTC GAT AAC GCG AGC ATA ATA AAC  120

121 GGC TCT GAT TAA ATT CTG AAG TTT GTT AGA TAC AAT GAT TTC GTT CGA AGG AAC TAC AAA  180

                                    M   K   K   K   I   I   S   A   I   L   M   S
181 ATA AAT TAT AAG GAG GCA CTC ACC ATG AAG AAA AAG ATT ATT AGT GCA ATT TTA ATG TCA  240

     T   V   I   L   S   A   A   A   P   L   S   G   V   Y   A   A   H   K   C   D
241 ACG GTC ATC TTA AGC GCT GCT GCC CCA TTG TCA GGT GTT TAT GCA GCA CAT AAG TGT GAT  300

       I   T   L   Q   E   I   I   K   T   L   N   S   L   T   E   Q   K   T   L   C
301 ATA ACA TTA CAA GAA ATT ATC AAA ACC CTT AAT AGT TTA ACT GAA CAG AAG ACT TTG TGT  360

     T   E   L   T   V   T   D   I   F   A   A   S   K   N   T   T   E   K   E   T
361 ACC GAA TTA ACT GTA ACT GAT ATT TTT GCT GCT TCT AAA AAT ACA ACT GAA AAA GAG ACA  420

     F   C   R   A   A   T   V   L   R   Q   F   Y   S   H   H   E   K   D   T   R
421 TTT TGT CGA GCT GCC ACA GTG TTA AGA CAA TTT TAC AGT CAT CAT GAA AAA GAC ACA AGA  480

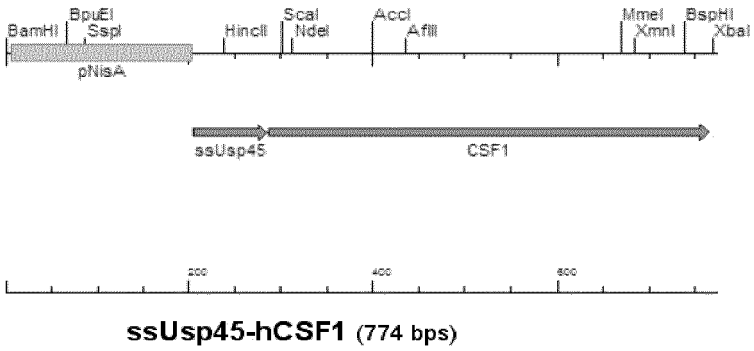
       C   L   G   A   T   A   Q   Q   F   H   R   H   K   Q   L   I   R   F   L   K
481 TGT CTT GGT GCT ACG GCA CAA CAA TTT CAT AGA CAC AAA CAA CTT ATC CGT TTT CTT AAA  540

     R   L   D   R   N   L   W   G   L   A   G   L   N   S   C   P   V   K   E   A
541 CGT TTG GAT CGT AAT CTG TGG GGC TTG GCA GGA TTG AAC AGT TGT CCT GTT AAA GAA GCC  600

     N   Q   S   T   L   E   N   F   L   E   R   L   K   T   I   M   R   E   K   Y
601 AAT CAA TCT ACT CTT GAA AAT TTC TTA GAG AGA TTG AAA ACA ATT ATG CGA GAA AAA TAT  660

     S   K   C   S   S   *
661 TCT AAG TGT TCA TCT TAA TAA TCT AGA                                              687
```

Figure 5c:



ssUsp45-hCSF1 (774 bps)

```
  1 GGA TCC TAG TCT TAT AAC TAT ACT GAC AAT AGA AAC ATT AAC AAA TCT AAA ACA GTC TTA   60

 61 ATT CTA TCT TGA GAA AGT ATT GGT AAT AAT ATT ATT GTC GAT AAC GCG AGC ATA ATA AAC  120

121 GGC TCT GAT TAA ATT CTG AAG TTT GTT AGA TAC AAT GAT TTC GTT CGA AGG AAC TAC AAA  180

                                    M   K   K   K   I   I   S   A   I   L   M   S
181 ATA AAT TAT AAG GAG GCA CTC ACC ATG AAA AAG AAA ATC ATT TCA GCG ATT TTG ATG TCA  240

    T   V   I   L   S   A   A   A   P   L   S   G   V   Y   A   A   E   E   V   S
241 ACG GTT ATT TTA AGC GCA GCA GCT CCA TTA TCT GGA GTT TAT GCA GCA GAA GAA GTT AGT  300

    E   Y   C   S   H   M   I   G   S   G   H   L   Q   S   L   Q   R   L   I   D
301 GAG TAC TGT AGT CAT ATG ATT GGT TCT GGA CAC TTA CAA TCA CTT CAG CGT CTT ATT GAT  360

    S   Q   M   E   T   S   C   Q   I   T   F   E   F   V   D   Q   E   Q   L   K
361 AGT CAA ATG GAA ACC TCT TGT CAA ATT ACA TTT GAA TTT GTA GAC CAA GAA CAA CTT AAA  420

    D   P   V   C   Y   L   K   K   A   F   L   L   V   Q   D   I   M   E   D   T
421 GAT CCA GTA TGT TAT CTT AAG AAA GCT TTT CTT TTA GTC CAA GAC ATA ATG GAA GAT ACA  480

    M   R   F   R   D   N   T   P   N   A   I   A   I   V   Q   L   Q   E   L   S
481 ATG AGA TTC AGA GAC AAT ACT CCT AAC GCT ATC GCC ATT GTC CAA TTA CAA GAA CTT TCT  540

    L   R   L   K   S   C   F   T   K   D   Y   E   E   H   D   K   A   C   V   R
541 TTA AGA TTG AAA AGT TGC TTC ACT AAA GAT TAT GAG GAA CAT GAT AAA GCT TGT GTT CGA  600

    T   F   Y   E   T   P   L   Q   L   L   E   K   V   K   N   V   F   N   E   T
601 ACA TTT TAT GAA ACT CCT TTG CAA TTA TTG GAA AAA GTG AAA AAT GTT TTC AAT GAG ACG  660

    K   N   L   L   D   K   D   W   N   I   F   S   K   N   C   N   N   S   F   A
661 AAG AAT TTG TTG GAT AAA GAT TGG AAT ATA TTC AGT AAG AAT TGT AAT AAC TCA TTT GCC  720

    E   C   S   S   Q   G   H   E   R   Q   S   E   G   S   *
721 GAA TGT TCA AGC CAG GGT CAT GAA CGT CAA TCA GAA GGC TCT TAA TAA TCT AGA          774
```

Figure 6a:

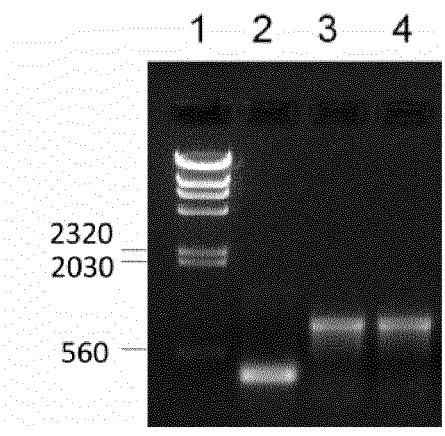


Figure 6b:

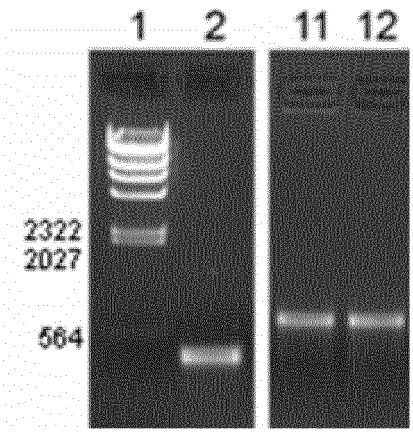


Figure 6c:

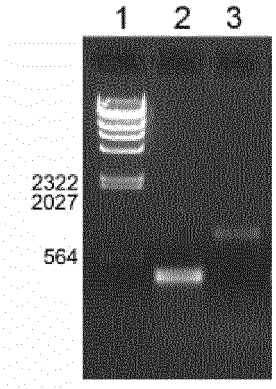
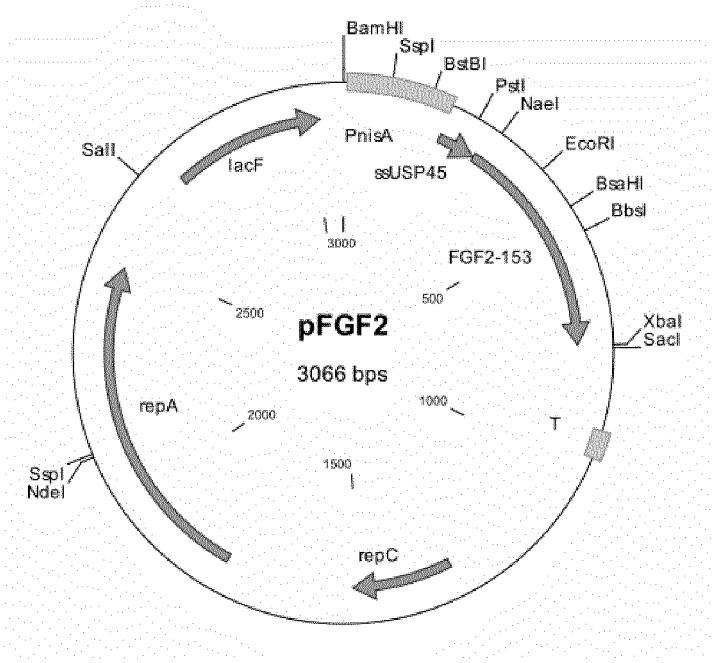


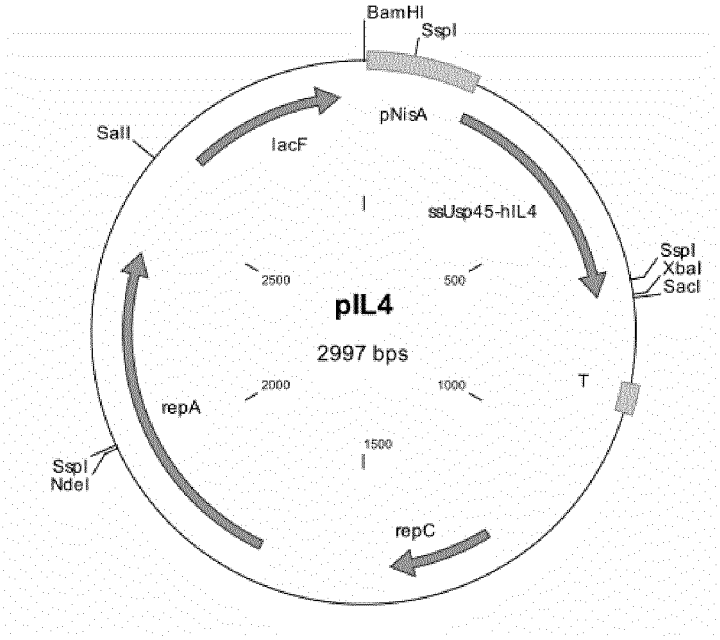
Figure 7a:




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aaaaattgta atttataaat aaaaatcacc ttttagaggt ggtttttta tttataaatt      960
attcgtttga tttcgctttc gatagaacaa tcaaatcgtt tctgagacgt tttagcgttt    1020
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```

```
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gggaatgaaa ttccctcatg ggtttgattt taaaaattgc ttgcaatttt gccgagcggt    1260
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aacgctctat cccaactggc tcaagggttt gaggggtttt tcaatcgcca acgaatcgcc    1440
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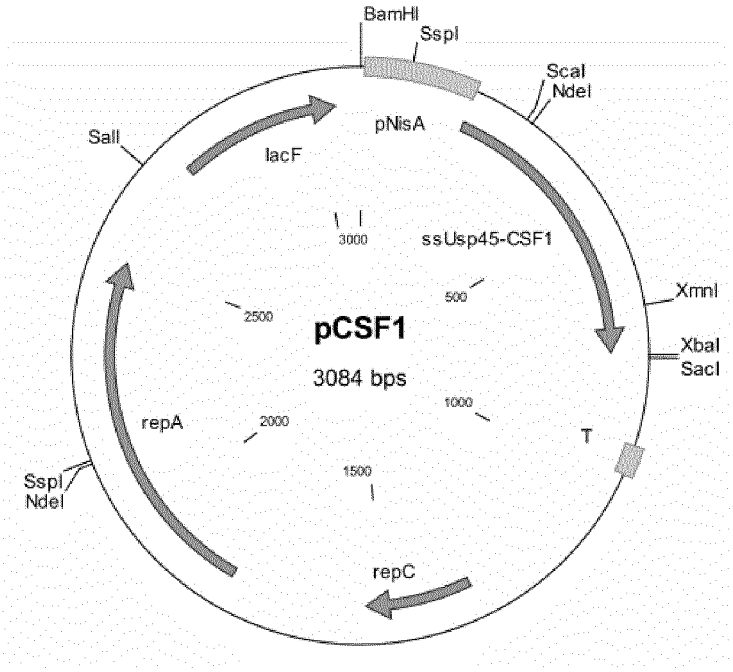
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Figure 7c:




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```

Figure 8:

Lane	Sample	
1	Marker	2 µl
2	FGF2 standard	0.1 µg
3	NZ3900 (pFGF2) (n.i.) T=0	sup
4	NZ3900 (pFGF2) (n.i.) T=6	sup
5	NZ3900 (pFGF2) OD0.5/5 T=0	sup
6	NZ3900 (pFGF2) OD0.5/5 T=2	sup
7	NZ3900 (pFGF2) OD0.5/5 T=4	sup
8	NZ3900 (pFGF2) OD0.5/5 T=6	sup
9	NZ3900 (pFGF2) OD3/5 T=4	sup
10	NZ3900 (pFGF2) OD3/5 T=6	sup

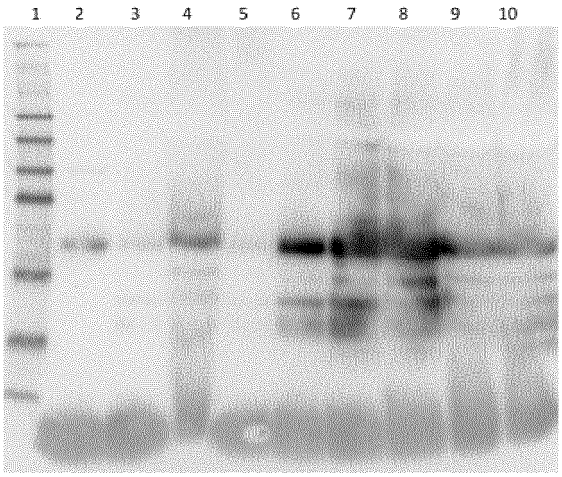
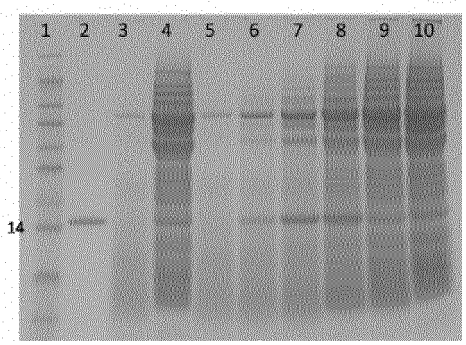
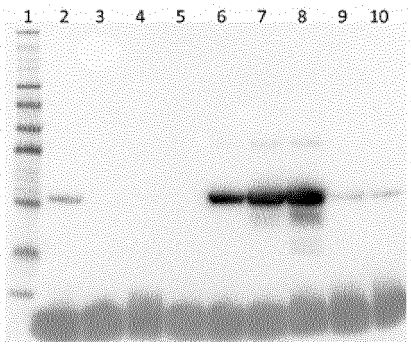


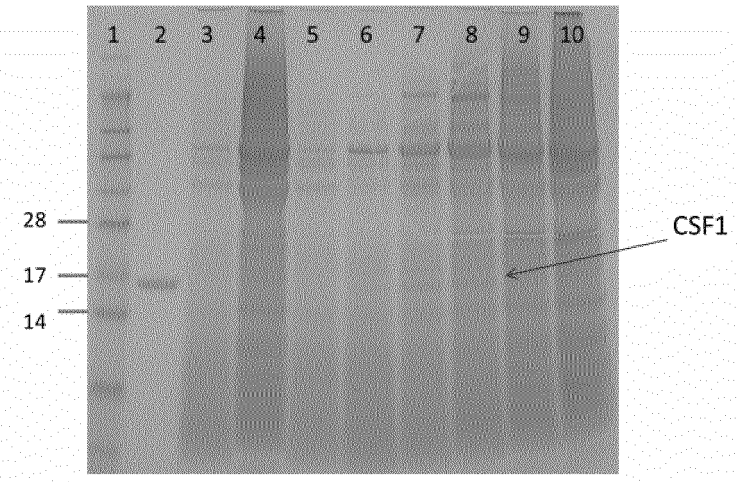
Figure 9:





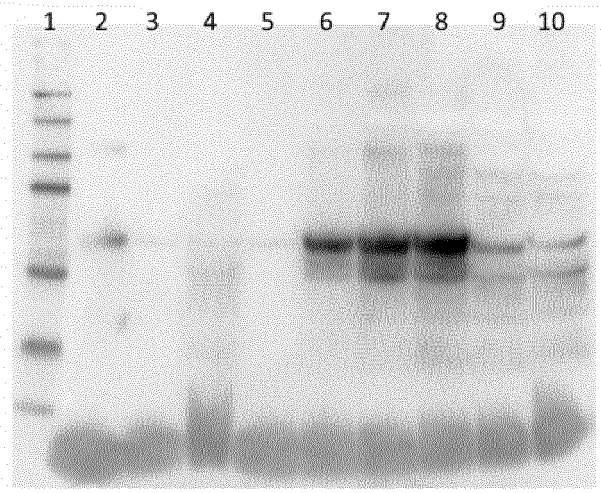
Lane	Sample	
1	SeeBlue marker	
2	hIL4	1 µg (Coom); 0.1 µg (WB)
3	Sup	No induction t=0
4	Sup	No induction t=6
5	Sup	0.5/5 t=0
6	Sup	0.5/5 t=2
7	Sup	0.5/5 t=4
8	Sup	0.5/5 t=6
9	Sup	3/5 t=4
10	Sup	3/5 t=6

Figure 10:



Lane	Sample	
1	SeeBlue marker	
2	CSF1	1 µg
3	Sup	Not induced t=0
4	Sup	Not induced t=6
5	Sup	0.5/5 t=0
6	Sup	0.5/5 t=2
7	Sup	0.5/5 t=4
8	Sup	0.5/5 t=6
9	Sup	3/5 t=4
10	Sup	3/5 t=6

Figure 11



Lane	Sample	
1	SeeBlue marker	
2	CSF1	0.1 µg
3	Sup	Not induced t=0
4	Sup	Not induced t=6
5	Sup	0.5/5 t=0
6	Sup	0.5/5 t=2
7	Sup	0.5/5 t=4
8	Sup	0.5/5 t=6
9	Sup	3/5 t=4
10	Sup	3/5 t=6

Figure 12:

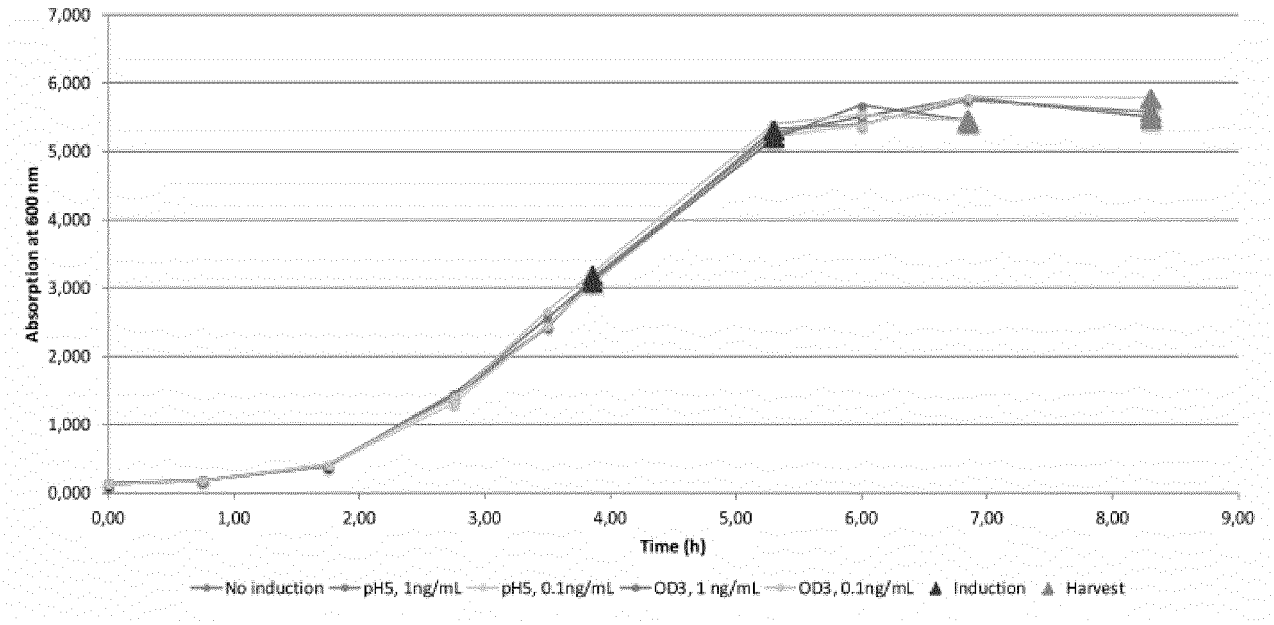
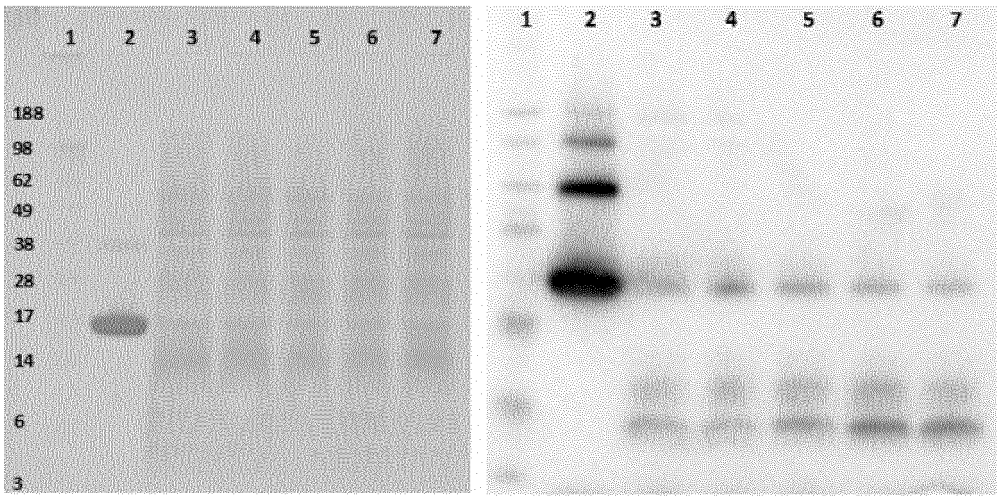


Figure 13



Lane	Sample	
1	SeeBlue marker	
2	FGF2	0,5 µg (Silver), 0.1 µg (WB)
3	Sup	not induced
4	Sup pH 5	1 ng/ml nisin
5	Sup pH 5	0.1 ng/ml nisin
6	Sup OD600 = 3	1 ng/ml nisin
7	Sup OD600 = 3	0.1 ng/ml nisin

Figure 14a

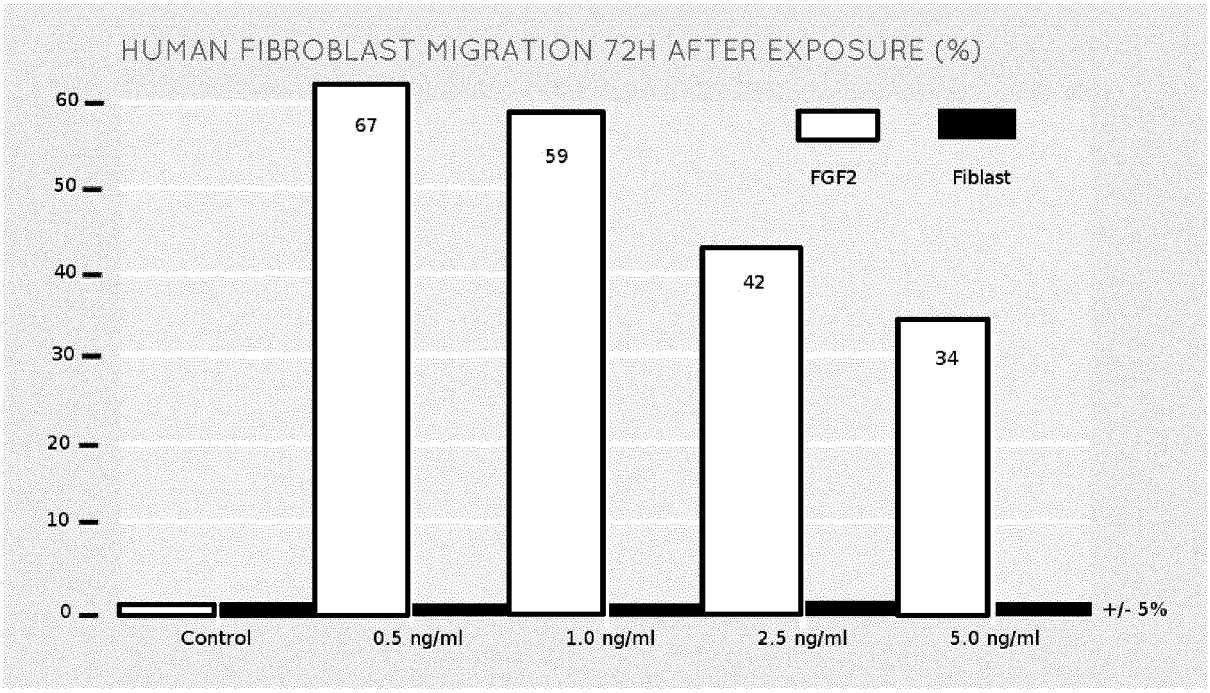


Figure 14b

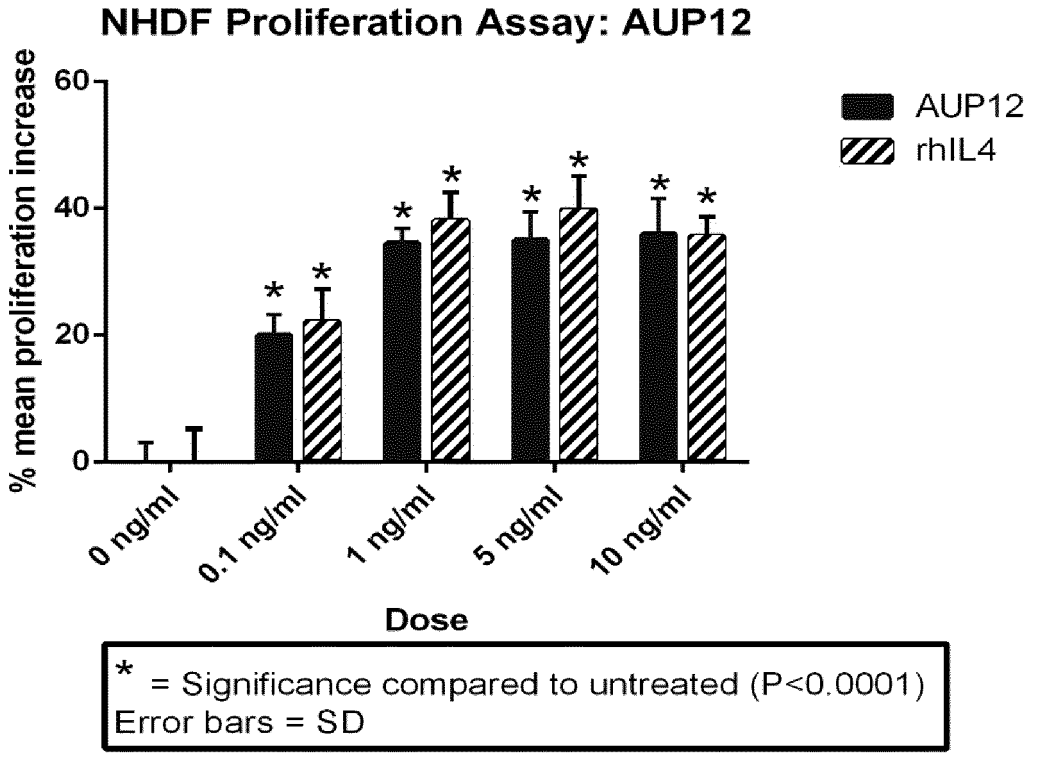


Figure 14c:

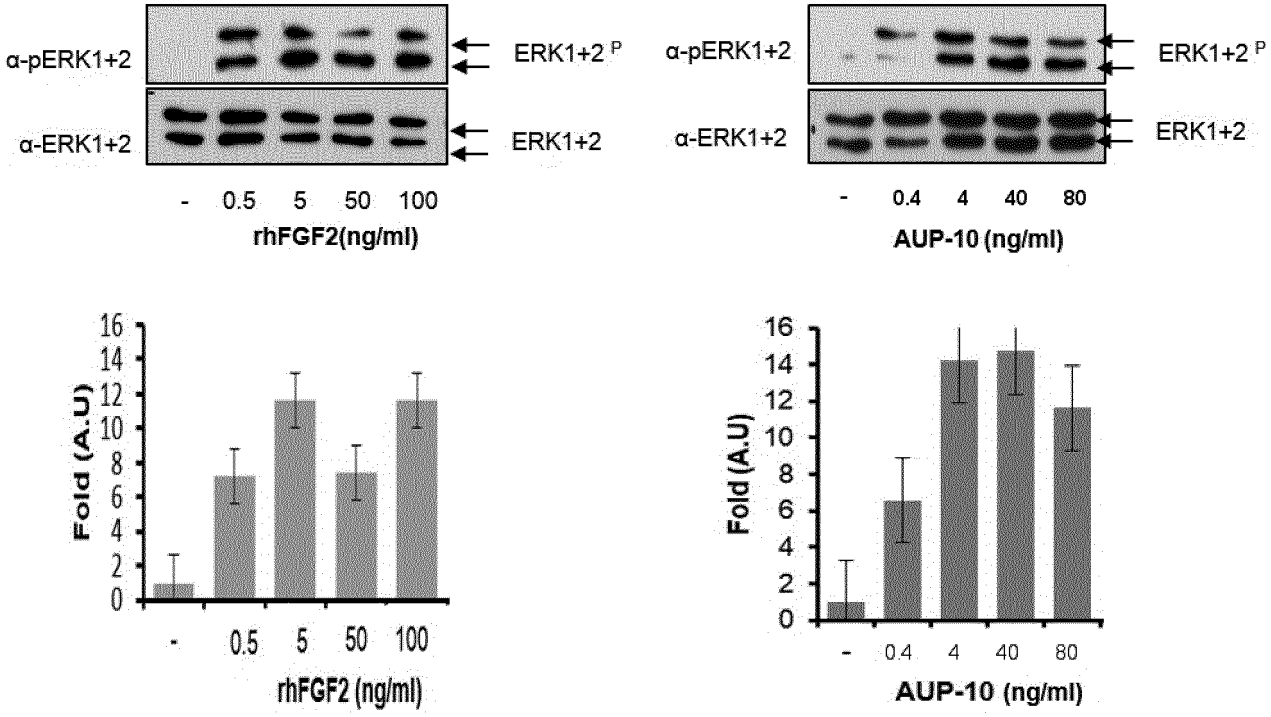


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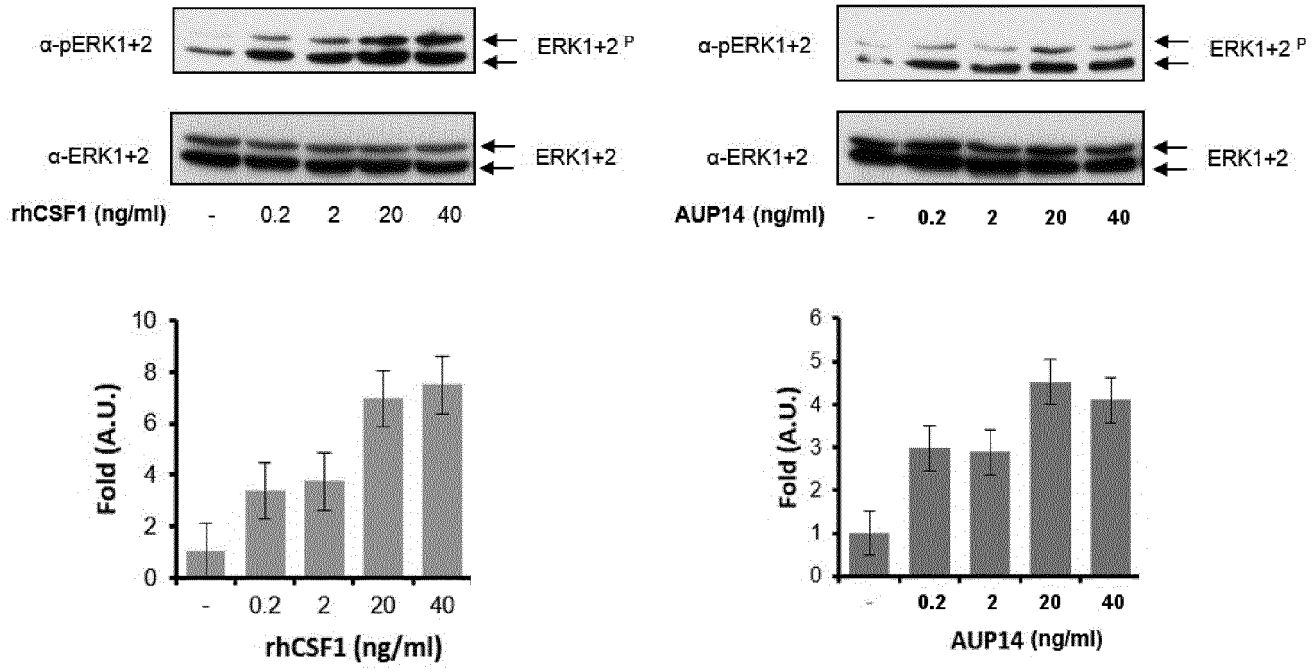


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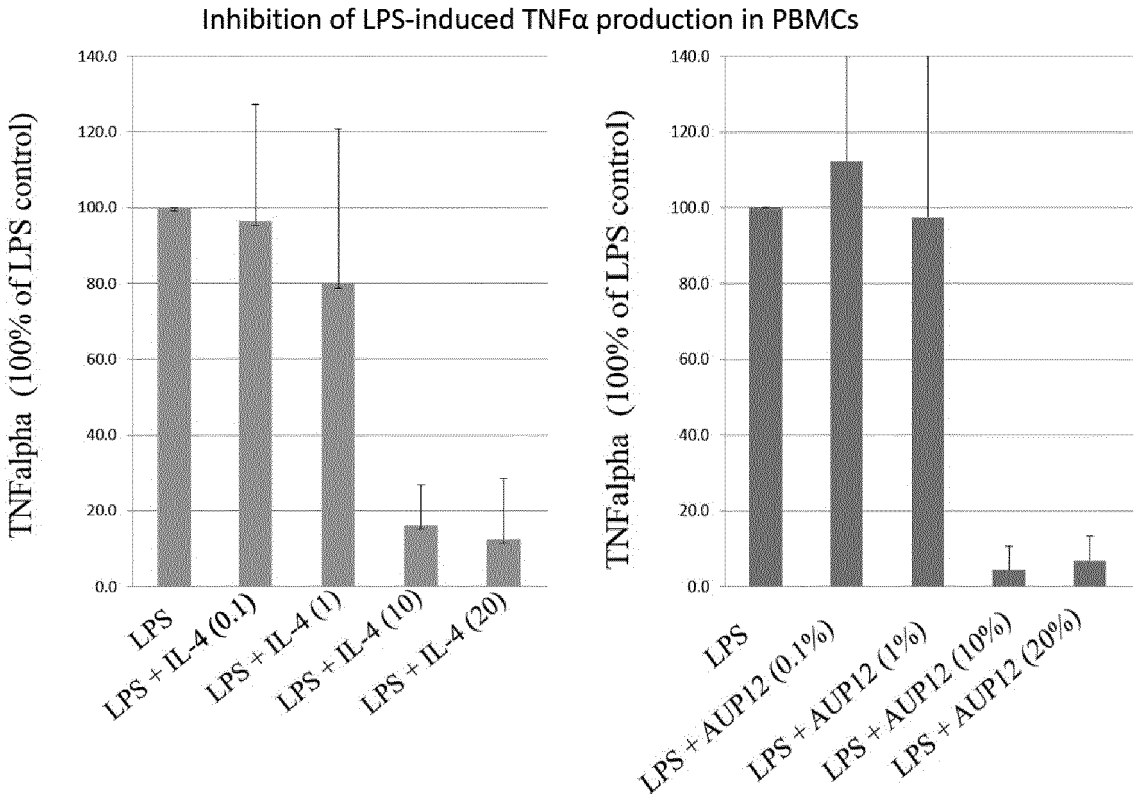


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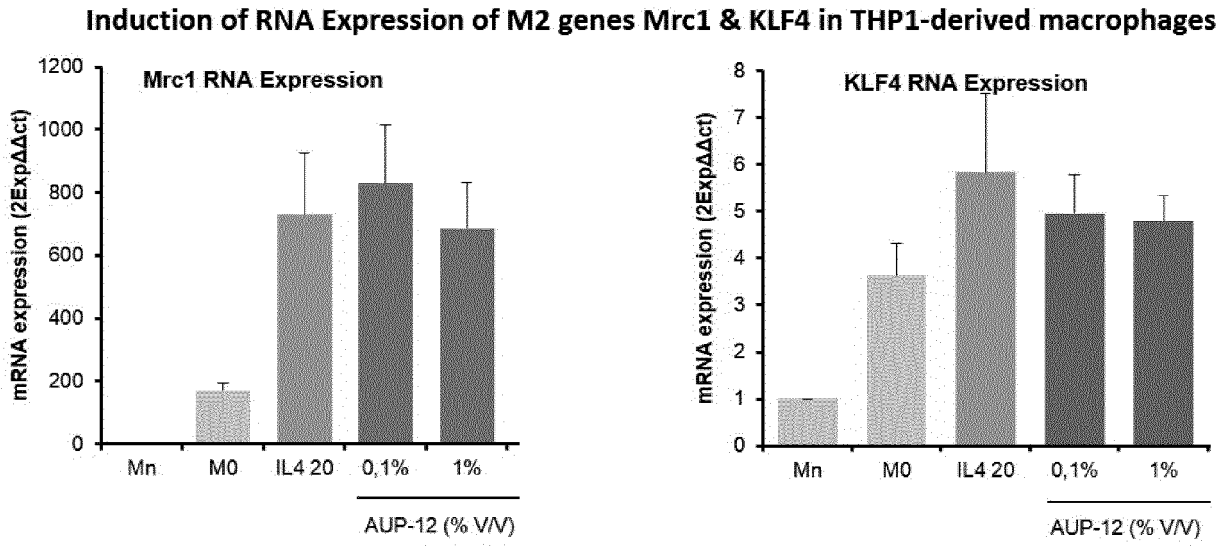


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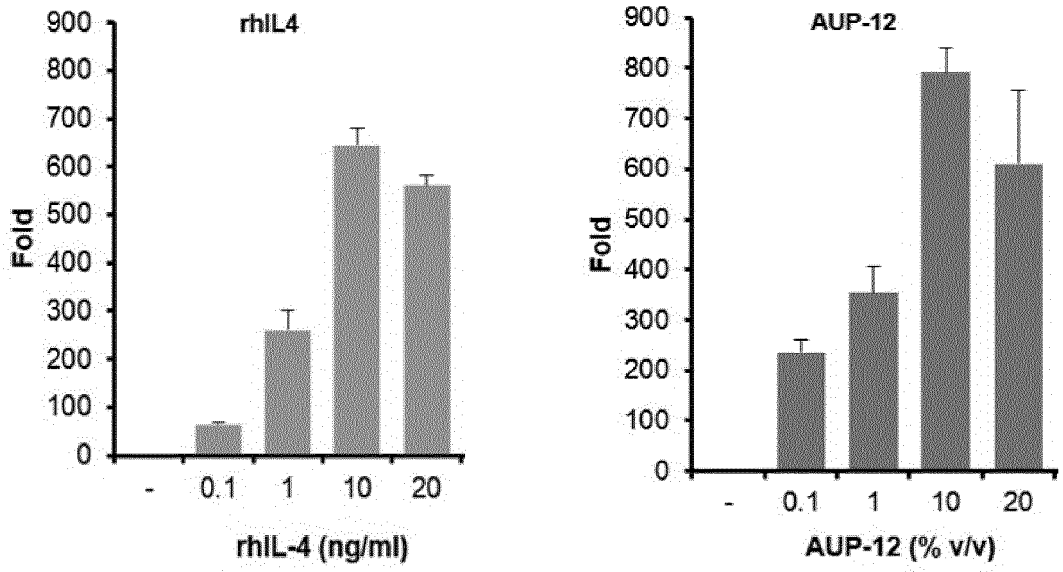
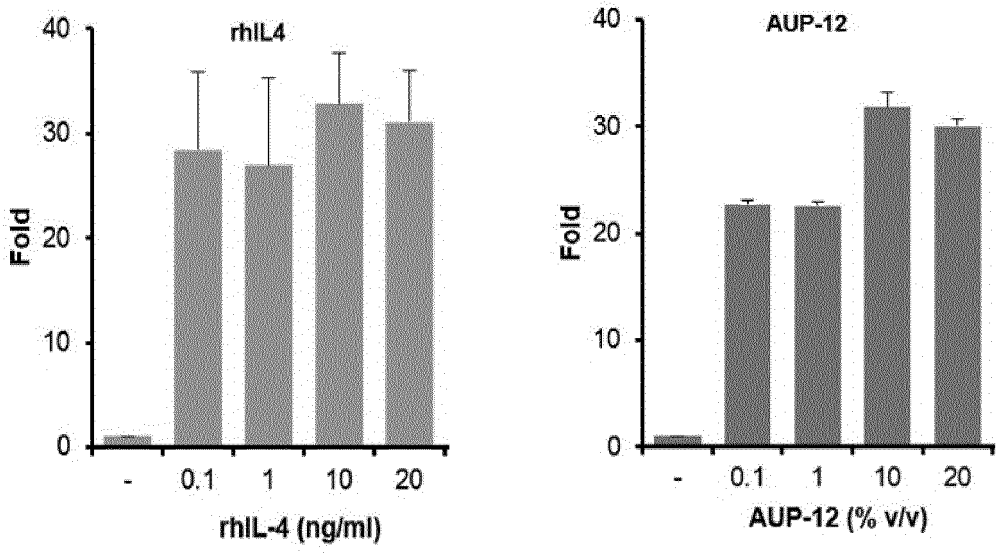


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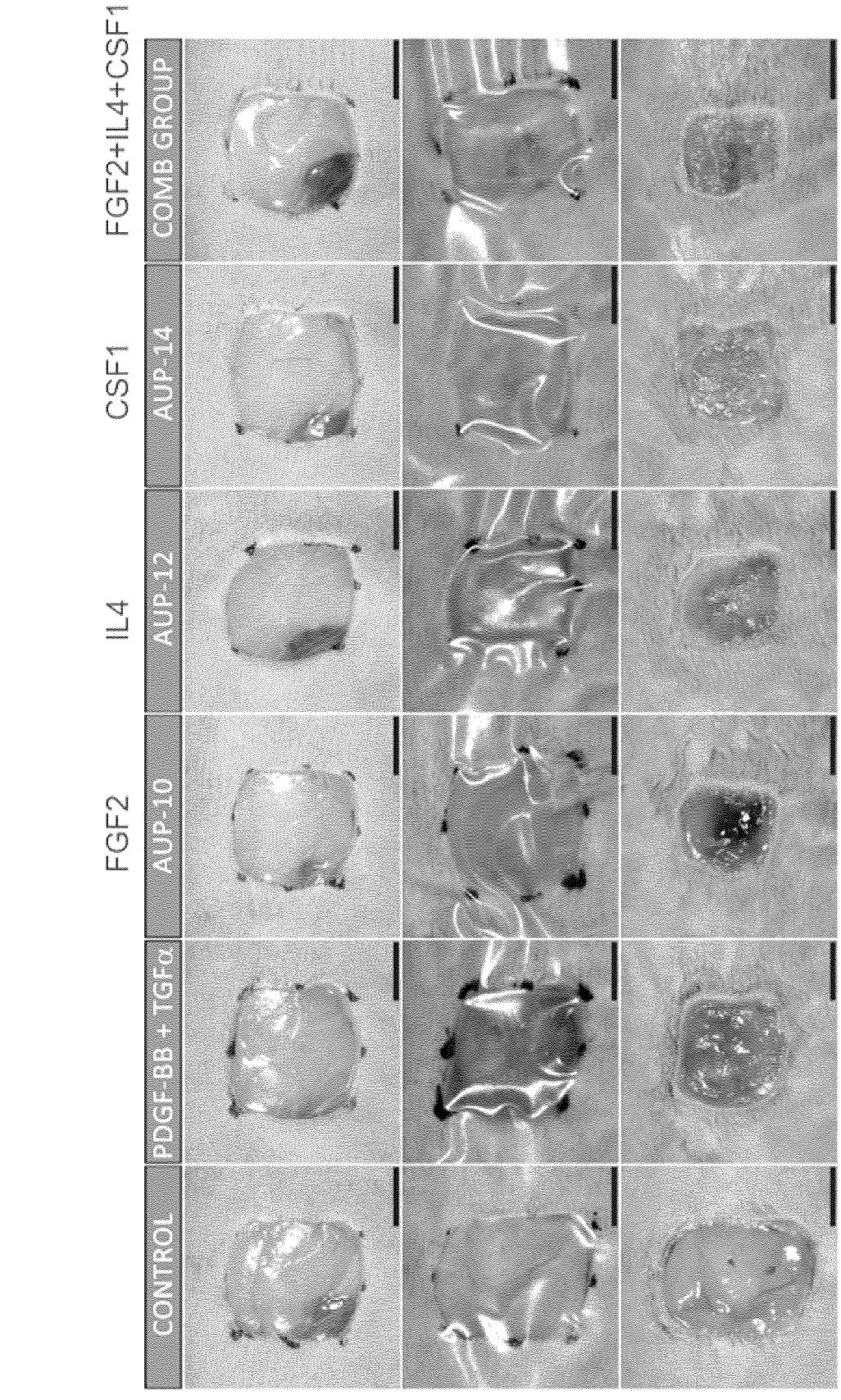

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CSF1
FGF2+IL4+CSF1
CONTROL
PDGF-BB + TGFα
AUP-10
AUP-12
AUP-14
COMB GROUP
DAY 0
DAY 4
DAY 7

Figure 15a

Figure 15b:

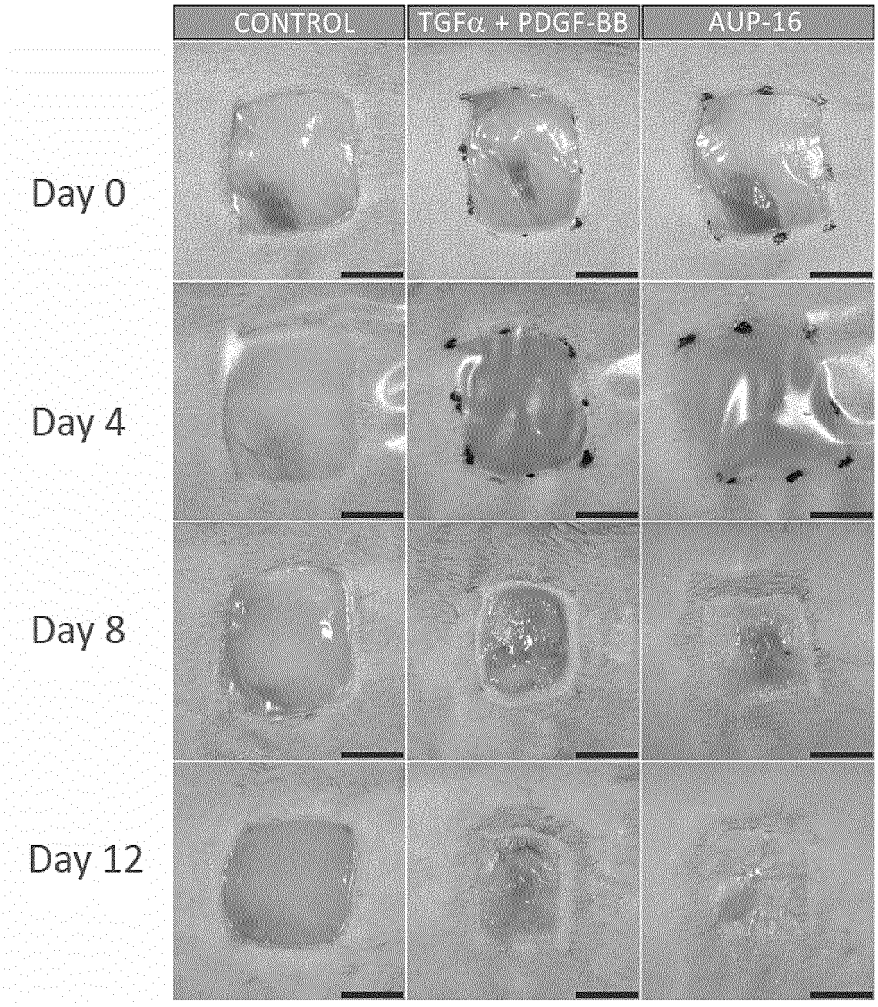


Figure 15c:

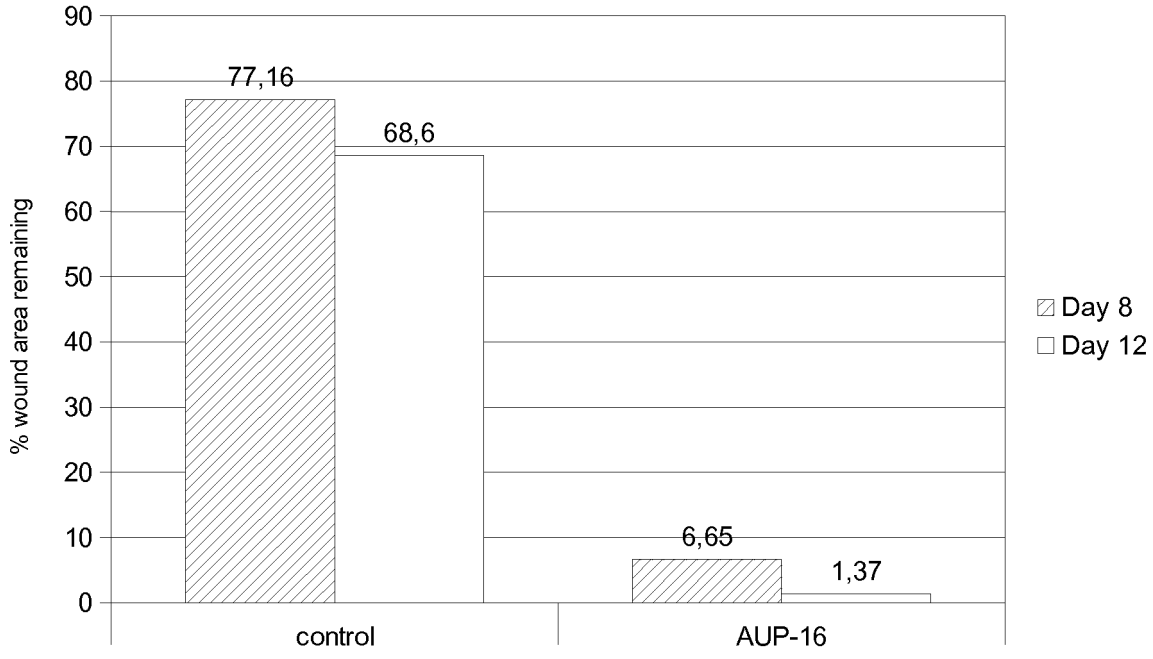


Figure 16a: Amino acid sequence of macrophage colony-stimulating factor 1 isoform a precursor from Homo sapiens

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Cys Ser His Met Ile Gly Ser Gly His Leu Gln Ser Leu Gln Arg Leu Ile Asp Ser
Gln Met Glu Thr Ser Cys Gln Ile Thr Phe Glu Phe Val Asp Gln Glu Gln Leu Lys
Asp Pro Val Cys Tyr Leu Lys Lys Ala Phe Leu Leu Val Gln Asp Ile Met Glu Asp
Thr Met Arg Phe Arg Asp Asn Thr Pro Asn Ala Ile Ala Ile Val Gln Leu Gln Glu
Leu Ser Leu Arg Leu Lys Ser Cys Phe Thr Lys Asp Tyr Glu Glu His Asp Lys Ala
Cys Val Arg Thr Phe Tyr Glu Thr Pro Leu Gln Leu Leu Glu Lys Val Lys Asn Val
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Asn Asn Ser Phe Ala Glu Cys Ser Ser Gln Asp Val Val Thr Lys Pro Asp Cys Asn
Cys Leu Tyr Pro Lys Ala Ile Pro Ser Ser Asp Pro Ala Ser Val Ser Pro His Gln
Pro Leu Ala Pro Ser Met Ala Pro Val Ala Gly Leu Thr Trp Glu Asp Ser Glu Gly
Thr Glu Gly Ser Ser Leu Leu Pro Gly Glu Gln Pro Leu His Thr Val Asp Pro Gly
Ser Ala Lys Gln Arg Pro Pro Arg Ser Thr Cys Gln Ser Phe Glu Pro Pro Glu Thr
Pro Val Val Lys Asp Ser Thr Ile Gly Gly Ser Pro Gln Pro Arg Pro Ser Val Gly
Ala Phe Asn Pro Gly Met Glu Asp Ile Leu Asp Ser Ala Met Gly Thr Asn Trp Val
Pro Glu Glu Ala Ser Gly Glu Ala Ser Glu Ile Pro Val Pro Gln Gly Thr Glu Leu
Ser Pro Ser Arg Pro Gly Gly Gly Ser Met Gln Thr Glu Pro Ala Arg Pro Ser Asn
Phe Leu Ser Ala Ser Ser Pro Leu Pro Ala Ser Ala Lys Gly Gln Gln Pro Ala Asp
Val Thr Gly Thr Ala Leu Pro Arg Val Gly Pro Val Arg Pro Thr Gly Gln Asp Trp
Asn His Thr Pro Gln Lys Thr Asp His Pro Ser Ala Leu Leu Arg Asp Pro Pro Glu
Pro Gly Ser Pro Arg Ile Ser Ser Leu Arg Pro Gln Gly Leu Ser Asn Pro Ser Thr
Leu Ser Ala Gln Pro Gln Leu Ser Arg Ser His Ser Ser Gly Ser Val Leu Pro Leu
Gly Glu Leu Glu Gly Arg Arg Ser Thr Arg Asp Arg Arg Ser Pro Ala Glu Pro Glu
Gly Gly Pro Ala Ser Glu Gly Ala Ala Arg Pro Leu Pro Arg Phe Asn Ser Val Pro
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Glu Ser Val Phe His Leu Leu Val Pro Ser Val Ile Leu Val Leu Leu Ala Val Gly
Gly Leu Leu Phe Tyr Arg Trp Arg Arg Arg Ser His Gln Glu Pro Gln Arg Ala Asp
Ser Pro Leu Glu Gln Pro Glu Gly Ser Pro Leu Thr Gln Asp Asp Arg Gln Val Glu
Leu Pro Val

Figure 16b: Amino acid sequence of macrophage colony-stimulating factor 1 isoform b precursor from Homo sapiens

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Leu Leu Leu Val Cys Leu Leu Ala Ser Arg Ser Ile Thr Glu Glu Val Ser Glu Tyr
Cys Ser His Met Ile Gly Ser Gly His Leu Gln Ser Leu Gln Arg Leu Ile Asp Ser
Gln Met Glu Thr Ser Cys Gln Ile Thr Phe Glu Phe Val Asp Gln Glu Gln Leu Lys
Asp Pro Val Cys Tyr Leu Lys Lys Ala Phe Leu Leu Val Gln Asp Ile Met Glu Asp
Thr Met Arg Phe Arg Asp Asn Thr Pro Asn Ala Ile Ala Ile Val Gln Leu Gln Glu

Leu Ser Leu Arg Leu Lys Ser Cys Phe Thr Lys Asp Tyr Glu Glu His Asp Lys Ala
Cys Val Arg Thr Phe Tyr Glu Thr Pro Leu Gln Leu Leu Glu Lys Val Lys Asn Val
Phe Asn Glu Thr Lys Asn Leu Leu Asp Lys Asp Trp Asn Ile Phe Ser Lys Asn Cys
Asn Asn Ser Phe Ala Glu Cys Ser Ser Gln Asp Val Val Thr Lys Pro Asp Cys Asn
Cys Leu Tyr Pro Lys Ala Ile Pro Ser Ser Asp Pro Ala Ser Val Ser Pro His Gln
Pro Leu Ala Pro Ser Met Ala Pro Val Ala Gly Leu Thr Trp Glu Asp Ser Glu Gly
Thr Glu Gly Ser Ser Leu Leu Pro Gly Glu Gln Pro Leu His Thr Val Asp Pro Gly
Ser Ala Lys Gln Arg Pro Pro Arg Ser Thr Cys Gln Ser Phe Glu Pro Pro Glu Thr
Pro Val Val Lys Asp Ser Thr Ile Gly Gly Ser Pro Gln Pro Arg Pro Ser Val Gly
Ala Phe Asn Pro Gly Met Glu Asp Ile Leu Asp Ser Ala Met Gly Thr Asn Trp Val
Pro Glu Glu Ala Ser Gly Glu Ala Ser Glu Ile Pro Val Pro Gln Gly Thr Glu Leu
Ser Pro Ser Arg Pro Gly Gly Gly Ser Met Gln Thr Glu Pro Ala Arg Pro Ser Asn
Phe Leu Ser Ala Ser Ser Pro Leu Pro Ala Ser Ala Lys Gly Gln Gln Pro Ala Asp
Val Thr Gly His Glu Arg Gln Ser Glu Gly Ser Ser Ser Pro Gln Leu Gln Glu Ser
Val Phe His Leu Leu Val Pro Ser Val Ile Leu Val Leu Leu Ala Val Gly Gly Leu
Leu Phe Tyr Arg Trp Arg Arg Arg Ser His Gln Glu Pro Gln Arg Ala Asp Ser Pro
Leu Glu Gln Pro Glu Gly Ser Pro Leu Thr Gln Asp Asp Arg Gln Val Glu Leu Pro
Val

Figure 16c: Amino acid sequence of macrophage colony-stimulating factor 1 isoform c precursor from Homo sapiens

Met Thr Ala Pro Gly Ala Ala Gly Arg Cys Pro Pro Thr Thr Trp Leu Gly Ser Leu
Leu Leu Leu Val Cys Leu Leu Ala Ser Arg Ser Ile Thr Glu Glu Val Ser Glu Tyr
Cys Ser His Met Ile Gly Ser Gly His Leu Gln Ser Leu Gln Arg Leu Ile Asp Ser
Gln Met Glu Thr Ser Cys Gln Ile Thr Phe Glu Phe Val Asp Gln Glu Gln Leu Lys
Asp Pro Val Cys Tyr Leu Lys Lys Ala Phe Leu Leu Val Gln Asp Ile Met Glu Asp
Thr Met Arg Phe Arg Asp Asn Thr Pro Asn Ala Ile Ala Ile Val Gln Leu Gln Glu
Leu Ser Leu Arg Leu Lys Ser Cys Phe Thr Lys Asp Tyr Glu Glu His Asp Lys Ala
Cys Val Arg Thr Phe Tyr Glu Thr Pro Leu Gln Leu Leu Glu Lys Val Lys Asn Val
Phe Asn Glu Thr Lys Asn Leu Leu Asp Lys Asp Trp Asn Ile Phe Ser Lys Asn Cys
Asn Asn Ser Phe Ala Glu Cys Ser Ser Gln Gly His Glu Arg Gln Ser Glu Gly Ser
Ser Ser Pro Gln Leu Gln Glu Ser Val Phe His Leu Leu Val Pro Ser Val Ile Leu
Val Leu Leu Ala Val Gly Gly Leu Leu Phe Tyr Arg Trp Arg Arg Arg Ser His Gln
Glu Pro Gln Arg Ala Asp Ser Pro Leu Glu Gln Pro Glu Gly Ser Pro Leu Thr Gln
Asp Asp Arg Gln Val Glu Leu Pro Val

Figure 16d: Amino acid sequence of a partial sequence of macrophage colony-stimulating factor 1 of Homo sapiens

Glu Glu Val Ser Glu Tyr Cys Ser His Met Ile Gly Ser Gly His Leu Gln Ser Leu
Gln Arg Leu Ile Asp Ser Gln Met Glu Thr Ser Cys Gln Ile Thr Phe Glu Phe Val
Asp Gln Glu Gln Leu Lys Asp Pro Val Cys Tyr Leu Lys Lys Ala Phe Leu Leu Val

Gln Asp Ile Met Glu Asp Thr Met Arg Phe Arg Asp Asn Thr Pro Asn Ala Ile Ala
Ile Val Gln Leu Gln Glu Leu Ser Leu Arg Leu Lys Ser Cys Phe Thr Lys Asp Tyr
Glu Glu His Asp Lys Ala Cys Val Arg Thr Phe Tyr Glu Thr Pro Leu Gln Leu Leu
Glu Lys Val Lys Asn Val Phe Asn Glu Thr Lys Asn Leu Leu Asp Lys Asp Trp Asn
Ile Phe Ser Lys Asn Cys Asn Asn Ser Phe Ala Glu Cys Ser Ser Gln

Figure 17a: Amino acid sequence of interleukin-34 isoform 1 precursor from Homo sapiens

Met Pro Arg Gly Phe Thr Trp Leu Arg Tyr Leu Gly Ile Phe Leu Gly Val Ala Leu
Gly Asn Glu Pro Leu Glu Met Trp Pro Leu Thr Gln Asn Glu Glu Cys Thr Val Thr
Gly Phe Leu Arg Asp Lys Leu Gln Tyr Arg Ser Arg Leu Gln Tyr Met Lys His Tyr
Phe Pro Ile Asn Tyr Lys Ile Ser Val Pro Tyr Glu Gly Val Phe Arg Ile Ala Asn
Val Thr Arg Leu Gln Arg Ala Gln Val Ser Glu Arg Glu Leu Arg Tyr Leu Trp Val
Leu Val Ser Leu Ser Ala Thr Glu Ser Val Gln Asp Val Leu Leu Glu Gly His Pro
Ser Trp Lys Tyr Leu Gln Glu Val Glu Thr Leu Leu Leu Asn Val Gln Gln Gly Leu
Thr Asp Val Glu Val Ser Pro Lys Val Glu Ser Val Leu Ser Leu Leu Asn Ala Pro
Gly Pro Asn Leu Lys Leu Val Arg Pro Lys Ala Leu Leu Asp Asn Cys Phe Arg Val
Met Glu Leu Leu Tyr Cys Ser Cys Cys Lys Gln Ser Ser Val Leu Asn Trp Gln Asp
Cys Glu Val Pro Ser Pro Gln Ser Cys Ser Pro Glu Pro Ser Leu Gln Tyr Ala Ala
Thr Gln Leu Tyr Pro Pro Pro Pro Trp Ser Pro Ser Ser Pro Pro His Ser Thr Gly
Ser Val Arg Pro Val Arg Ala Gln Gly Glu Gly Leu Leu Pro

Figure 17b: Amino acid sequence of interleukin-34 isoform 2 precursor from Homo sapiens

Met Pro Arg Gly Phe Thr Trp Leu Arg Tyr Leu Gly Ile Phe Leu Gly Val Ala Leu
Gly Asn Glu Pro Leu Glu Met Trp Pro Leu Thr Gln Asn Glu Glu Cys Thr Val Thr
Gly Phe Leu Arg Asp Lys Leu Gln Tyr Arg Ser Arg Leu Gln Tyr Met Lys His Tyr
Phe Pro Ile Asn Tyr Lys Ile Ser Val Pro Tyr Glu Gly Val Phe Arg Ile Ala Asn
Val Thr Arg Leu Arg Ala Gln Val Ser Glu Arg Glu Leu Arg Tyr Leu Trp Val Leu
Val Ser Leu Ser Ala Thr Glu Ser Val Gln Asp Val Leu Leu Glu Gly His Pro Ser
Trp Lys Tyr Leu Gln Glu Val Glu Thr Leu Leu Leu Asn Val Gln Gln Gly Leu Thr
Asp Val Glu Val Ser Pro Lys Val Glu Ser Val Leu Ser Leu Leu Asn Ala Pro Gly
Pro Asn Leu Lys Leu Val Arg Pro Lys Ala Leu Leu Asp Asn Cys Phe Arg Val Met
Glu Leu Leu Tyr Cys Ser Cys Cys Lys Gln Ser Ser Val Leu Asn Trp Gln Asp Cys
Glu Val Pro Ser Pro Gln Ser Cys Ser Pro Glu Pro Ser Leu Gln Tyr Ala Ala Thr
Gln Leu Tyr Pro Pro Pro Pro Trp Ser Pro Ser Ser Pro Pro His Ser Thr Gly Ser
Val Arg Pro Val Arg Ala Gln Gly Glu Gly Leu Leu Pro

Figure 17c: Amino acid sequence of interleukin-34 from Homo sapiens

Asn Glu Pro Leu Glu Met Trp Pro Leu Thr Gln Asn Glu Glu Cys Thr Val Thr Gly
Phe Leu Arg Asp Lys Leu Gln Tyr Arg Ser Arg Leu Gln Tyr Met Lys His Tyr Phe

Pro Ile Asn Tyr Lys Ile Ser Val Pro Tyr Glu Gly Val Phe Arg Ile Ala Asn Val
Thr Arg Leu Gln Arg Ala Gln Val Ser Glu Arg Glu Leu Arg Tyr Leu Trp Val Leu
Val Ser Leu Ser Ala Thr Glu Ser Val Gln Asp Val Leu Leu Glu Gly His Pro Ser
Trp Lys Tyr Leu Gln Glu Val Glu Thr Leu Leu Leu Asn Val Gln Gln Gly Leu Thr
Asp Val Glu Val Ser Pro Lys Val Glu Ser Val Leu Ser Leu Leu Asn Ala Pro Gly
Pro Asn Leu Lys Leu Val Arg Pro Lys Ala Leu Leu Asp Asn Cys Phe Arg Val Met
Glu Leu Leu Tyr Cys Ser Cys Cys Lys Gln Ser Ser Val Leu Asn Trp Gln Asp Cys
Glu Val Pro Ser Pro Gln Ser Cys Ser Pro Glu Pro Ser Leu Gln Tyr Ala Ala Thr
Gln Leu Tyr Pro Pro Pro Pro Trp Ser Pro Ser Ser Pro Pro His Ser Thr Gly Ser
Val Arg Pro Val Arg Ala Gln Gly Glu Gly Leu Leu Pro

Figure 18a: Amino acid sequence of interleukin-4 isoform 1 precursor from Homo sapiens

Met Gly Leu Thr Ser Gln Leu Leu Pro Pro Leu Phe Phe Leu Leu Ala Cys Ala Gly
Asn Phe Val His Gly His Lys Cys Asp Ile Thr Leu Gln Glu Ile Ile Lys Thr Leu
Asn Ser Leu Thr Glu Gln Lys Thr Leu Cys Thr Glu Leu Thr Val Thr Asp Ile Phe
Ala Ala Ser Lys Asn Thr Thr Glu Lys Glu Thr Phe Cys Arg Ala Ala Thr Val Leu
Arg Gln Phe Tyr Ser His His Glu Lys Asp Thr Arg Cys Leu Gly Ala Thr Ala Gln
Gln Phe His Arg His Lys Gln Leu Ile Arg Phe Leu Lys Arg Leu Asp Arg Asn Leu
Trp Gly Leu Ala Gly Leu Asn Ser Cys Pro Val Lys Glu Ala Asn Gln Ser Thr Leu
Glu Asn Phe Leu Glu Arg Leu Lys Thr Ile Met Arg Glu Lys Tyr Ser Lys Cys Ser
Ser

Figure 18b: Amino acid sequence of interleukin-4 isoform 2 precursor from Homo sapiens

Met Gly Leu Thr Ser Gln Leu Leu Pro Pro Leu Phe Phe Leu Leu Ala Cys Ala Gly
Asn Phe Val His Gly His Lys Cys Asp Ile Thr Leu Gln Glu Ile Ile Lys Thr Leu
Asn Ser Leu Thr Glu Gln Lys Asn Thr Thr Glu Lys Glu Thr Phe Cys Arg Ala Ala
Thr Val Leu Arg Gln Phe Tyr Ser His His Glu Lys Asp Thr Arg Cys Leu Gly Ala
Thr Ala Gln Gln Phe His Arg His Lys Gln Leu Ile Arg Phe Leu Lys Arg Leu Asp
Arg Asn Leu Trp Gly Leu Ala Gly Leu Asn Ser Cys Pro Val Lys Glu Ala Asn Gln
Ser Thr Leu Glu Asn Phe Leu Glu Arg Leu Lys Thr Ile Met Arg Glu Lys Tyr Ser
Lys Cys Ser Ser

Figure 18c: Amino acid sequence of interleukin-4 from Homo sapiens

His Lys Cys Asp Ile Thr Leu Gln Glu Ile Ile Lys Thr Leu Asn Ser Leu Thr Glu
Gln Lys Thr Leu Cys Thr Glu Leu Thr Val Thr Asp Ile Phe Ala Ala Ser Lys Asn
Thr Thr Glu Lys Glu Thr Phe Cys Arg Ala Ala Thr Val Leu Arg Gln Phe Tyr Ser
His His Glu Lys Asp Thr Arg Cys Leu Gly Ala Thr Ala Gln Gln Phe His Arg His
Lys Gln Leu Ile Arg Phe Leu Lys Arg Leu Asp Arg Asn Leu Trp Gly Leu Ala Gly

Leu Asn Ser Cys Pro Val Lys Glu Ala Asn Gln Ser Thr Leu Glu Asn Phe Leu Glu
Arg Leu Lys Thr Ile Met Arg Glu Lys Tyr Ser Lys Cys Ser Ser

Figure 19a: Amino acid sequence of interleukin-10 precursor from Homo sapiens

Met His Ser Ser Ala Leu Leu Cys Cys Leu Val Leu Leu Thr Gly Val Arg Ala Ser
Pro Gly Gln Gly Thr Gln Ser Glu Asn Ser Cys Thr His Phe Pro Gly Asn Leu Pro
Asn Met Leu Arg Asp Leu Arg Asp Ala Phe Ser Arg Val Lys Thr Phe Phe Gln Met
Lys Asp Gln Leu Asp Asn Leu Leu Leu Lys Glu Ser Leu Leu Glu Asp Phe Lys Gly
Tyr Leu Gly Cys Gln Ala Leu Ser Glu Met Ile Gln Phe Tyr Leu Glu Glu Val Met
Pro Gln Ala Glu Asn Gln Asp Pro Asp Ile Lys Ala His Val Asn Ser Leu Gly Glu
Asn Leu Lys Thr Leu Arg Leu Arg Leu Arg Arg Cys His Arg Phe Leu Pro Cys Glu
Asn Lys Ser Lys Ala Val Glu Gln Val Lys Asn Ala Phe Asn Lys Leu Gln Glu Lys
Gly Ile Tyr Lys Ala Met Ser Glu Phe Asp Ile Phe Ile Asn Tyr Ile Glu Ala Tyr
Met Thr Met Lys Ile Arg Asn

Figure 19b: Amino acid sequence of interleukin-10 from Homo sapiens

Ser Pro Gly Gln Gly Thr Gln Ser Glu Asn Ser Cys Thr His Phe Pro Gly Asn Leu
Pro Asn Met Leu Arg Asp Leu Arg Asp Ala Phe Ser Arg Val Lys Thr Phe Phe Gln
Met Lys Asp Gln Leu Asp Asn Leu Leu Leu Lys Glu Ser Leu Leu Glu Asp Phe Lys
Gly Tyr Leu Gly Cys Gln Ala Leu Ser Glu Met Ile Gln Phe Tyr Leu Glu Glu Val
Met Pro Gln Ala Glu Asn Gln Asp Pro Asp Ile Lys Ala His Val Asn Ser Leu Gly
Glu Asn Leu Lys Thr Leu Arg Leu Arg Leu Arg Arg Cys His Arg Phe Leu Pro Cys
Glu Asn Lys Ser Lys Ala Val Glu Gln Val Lys Asn Ala Phe Asn Lys Leu Gln Glu
Lys Gly Ile Tyr Lys Ala Met Ser Glu Phe Asp Ile Phe Ile Asn Tyr Ile Glu Ala
Tyr Met Thr Met Lys Ile Arg Asn

Figure 20a: Amino acid sequence of interleukin-13 precursor from Homo sapiens

Met His Pro Leu Leu Asn Pro Leu Leu Leu Ala Leu Gly Leu Met Ala Leu Leu Leu
Thr Thr Val Ile Ala Leu Thr Cys Leu Gly Gly Phe Ala Ser Pro Gly Pro Val Pro
Pro Ser Thr Ala Leu Arg Glu Leu Ile Glu Glu Leu Val Asn Ile Thr Gln Asn Gln
Lys Ala Pro Leu Cys Asn Gly Ser Met Val Trp Ser Ile Asn Leu Thr Ala Gly Met
Tyr Cys Ala Ala Leu Glu Ser Leu Ile Asn Val Ser Gly Cys Ser Ala Ile Glu Lys
Thr Gln Arg Met Leu Ser Gly Phe Cys Pro His Lys Val Ser Ala Gly Gln Phe Ser
Ser Leu His Val Arg Asp Thr Lys Ile Glu Val Ala Gln Phe Val Lys Asp Leu Leu
Leu His Leu Lys Lys Leu Phe Arg Glu Gly Arg Phe Asn

Figure 20b: Amino acid sequence of interleukin-13 from Homo sapiens

Gly Pro Val Pro Pro Ser Thr Ala Leu Arg Glu Leu Ile Glu Glu Leu Val Asn Ile
Thr Gln Asn Gln Lys Ala Pro Leu Cys Asn Gly Ser Met Val Trp Ser Ile Asn Leu
Thr Ala Gly Met Tyr Cys Ala Ala Leu Glu Ser Leu Ile Asn Val Ser Gly Cys Ser
Ala Ile Glu Lys Thr Gln Arg Met Leu Ser Gly Phe Cys Pro His Lys Val Ser Ala
Gly Gln Phe Ser Ser Leu His Val Arg Asp Thr Lys Ile Glu Val Ala Gln Phe Val
Lys Asp Leu Leu Leu His Leu Lys Lys Leu Phe Arg Glu Gly Arg Phe Asn

Figure 21a: Amino acid sequence of transforming growth factor beta-1 precursor from Homo sapiens

Met Pro Pro Ser Gly Leu Arg Leu Leu Pro Leu Leu Leu Pro Leu Leu Trp Leu Leu
Val Leu Thr Pro Gly Arg Pro Ala Ala Gly Leu Ser Thr Cys Lys Thr Ile Asp Met
Glu Leu Val Lys Arg Lys Arg Ile Glu Ala Ile Arg Gly Gln Ile Leu Ser Lys Leu
Arg Leu Ala Ser Pro Pro Ser Gln Gly Glu Val Pro Pro Gly Pro Leu Pro Glu Ala
Val Leu Ala Leu Tyr Asn Ser Thr Arg Asp Arg Val Ala Gly Glu Ser Ala Glu Pro
Glu Pro Glu Pro Glu Ala Asp Tyr Tyr Ala Lys Glu Val Thr Arg Val Leu Met Val
Glu Thr His Asn Glu Ile Tyr Asp Lys Phe Lys Gln Ser Thr His Ser Ile Tyr Met
Phe Phe Asn Thr Ser Glu Leu Arg Glu Ala Val Pro Glu Pro Val Leu Leu Ser Arg
Ala Glu Leu Arg Leu Leu Arg Leu Lys Leu Lys Val Glu Gln His Val Glu Leu Tyr
Gln Lys Tyr Ser Asn Asn Ser Trp Arg Tyr Leu Ser Asn Arg Leu Leu Ala Pro Ser
Asp Ser Pro Glu Trp Leu Ser Phe Asp Val Thr Gly Val Val Arg Gln Trp Leu Ser
Arg Gly Gly Glu Ile Glu Gly Phe Arg Leu Ser Ala His Cys Ser Cys Asp Ser Arg
Asp Asn Thr Leu Gln Val Asp Ile Asn Gly Phe Thr Thr Gly Arg Arg Gly Asp Leu
Ala Thr Ile His Gly Met Asn Arg Pro Phe Leu Leu Leu Met Ala Thr Pro Leu Glu
Arg Ala Gln His Leu Gln Ser Ser Arg His Arg Arg Ala Leu Asp Thr Asn Tyr Cys
Phe Ser Ser Thr Glu Lys Asn Cys Cys Val Arg Gln Leu Tyr Ile Asp Phe Arg Lys
Asp Leu Gly Trp Lys Trp Ile His Glu Pro Lys Gly Tyr His Ala Asn Phe Cys Leu
Gly Pro Cys Pro Tyr Ile Trp Ser Leu Asp Thr Gln Tyr Ser Lys Val Leu Ala Leu
Tyr Asn Gln His Asn Pro Gly Ala Ser Ala Ala Pro Cys Cys Val Pro Gln Ala Leu
Glu Pro Leu Pro Ile Val Tyr Tyr Val Gly Arg Lys Pro Lys Val Glu Gln Leu Ser
Asn Met Ile Val Arg Ser Cys Lys Cys Ser

Figure 21b: Amino acid sequence of transforming growth factor beta-1 from Homo sapiens

Ala Leu Asp Thr Asn Tyr Cys Phe Ser Ser Thr Glu Lys Asn Cys Cys Val Arg Gln
Leu Tyr Ile Asp Phe Arg Lys Asp Leu Gly Trp Lys Trp Ile His Glu Pro Lys Gly
Tyr His Ala Asn Phe Cys Leu Gly Pro Cys Pro Tyr Ile Trp Ser Leu Asp Thr Gln
Tyr Ser Lys Val Leu Ala Leu Tyr Asn Gln His Asn Pro Gly Ala Ser Ala Ala Pro
Cys Cys Val Pro Gln Ala Leu Glu Pro Leu Pro Ile Val Tyr Tyr Val Gly Arg Lys
Pro Lys Val Glu Gln Leu Ser Asn Met Ile Val Arg Ser Cys Lys Cys Ser

Figure 21c: Amino acid sequence of transforming growth factor beta-2 isoform 1 precursor from Homo sapiens

Met His Tyr Cys Val Leu Ser Ala Phe Leu Ile Leu His Leu Val Thr Val Ala Leu
Ser Leu Ser Thr Cys Ser Thr Leu Asp Met Asp Gln Phe Met Arg Lys Arg Ile Glu
Ala Ile Arg Gly Gln Ile Leu Ser Lys Leu Lys Leu Thr Ser Pro Pro Glu Asp Tyr
Pro Glu Pro Glu Glu Val Pro Pro Glu Val Ile Ser Ile Tyr Asn Ser Thr Arg Asp
Leu Leu Gln Glu Lys Ala Ser Arg Arg Ala Ala Ala Cys Glu Arg Glu Arg Ser Asp
Glu Glu Tyr Tyr Ala Lys Glu Val Tyr Lys Ile Asp Met Pro Pro Phe Phe Pro Ser
Glu Thr Val Cys Pro Val Val Thr Thr Pro Ser Gly Ser Val Gly Ser Leu Cys Ser
Arg Gln Ser Gln Val Leu Cys Gly Tyr Leu Asp Ala Ile Pro Pro Thr Phe Tyr Arg
Pro Tyr Phe Arg Ile Val Arg Phe Asp Val Ser Ala Met Glu Lys Asn Ala Ser Asn
Leu Val Lys Ala Glu Phe Arg Val Phe Arg Leu Gln Asn Pro Lys Ala Arg Val Pro
Glu Gln Arg Ile Glu Leu Tyr Gln Ile Leu Lys Ser Lys Asp Leu Thr Ser Pro Thr
Gln Arg Tyr Ile Asp Ser Lys Val Val Lys Thr Arg Ala Glu Gly Glu Trp Leu Ser
Phe Asp Val Thr Asp Ala Val His Glu Trp Leu His His Lys Asp Arg Asn Leu Gly
Phe Lys Ile Ser Leu His Cys Pro Cys Cys Thr Phe Val Pro Ser Asn Asn Tyr Ile
Ile Pro Asn Lys Ser Glu Glu Leu Glu Ala Arg Phe Ala Gly Ile Asp Gly Thr Ser
Thr Tyr Thr Ser Gly Asp Gln Lys Thr Ile Lys Ser Thr Arg Lys Lys Asn Ser Gly
Lys Thr Pro His Leu Leu Leu Met Leu Leu Pro Ser Tyr Arg Leu Glu Ser Gln Gln
Thr Asn Arg Arg Lys Lys Arg Ala Leu Asp Ala Ala Tyr Cys Phe Arg Asn Val Gln
Asp Asn Cys Cys Leu Arg Pro Leu Tyr Ile Asp Phe Lys Arg Asp Leu Gly Trp Lys
Trp Ile His Glu Pro Lys Gly Tyr Asn Ala Asn Phe Cys Ala Gly Ala Cys Pro Tyr
Leu Trp Ser Ser Asp Thr Gln His Ser Arg Val Leu Ser Leu Tyr Asn Thr Ile Asn
Pro Glu Ala Ser Ala Ser Pro Cys Cys Val Ser Gln Asp Leu Glu Pro Leu Thr Ile
Leu Tyr Tyr Ile Gly Lys Thr Pro Lys Ile Glu Gln Leu Ser Asn Met Ile Val Lys
Ser Cys Lys Cys Ser

Figure 21d: Amino acid sequence of transforming growth factor beta-2 isoform 2 precursor from Homo sapiens

Met His Tyr Cys Val Leu Ser Ala Phe Leu Ile Leu His Leu Val Thr Val Ala Leu
Ser Leu Ser Thr Cys Ser Thr Leu Asp Met Asp Gln Phe Met Arg Lys Arg Ile Glu
Ala Ile Arg Gly Gln Ile Leu Ser Lys Leu Lys Leu Thr Ser Pro Pro Glu Asp Tyr
Pro Glu Pro Glu Glu Val Pro Pro Glu Val Ile Ser Ile Tyr Asn Ser Thr Arg Asp
Leu Leu Gln Glu Lys Ala Ser Arg Arg Ala Ala Ala Cys Glu Arg Glu Arg Ser Asp
Glu Glu Tyr Tyr Ala Lys Glu Val Tyr Lys Ile Asp Met Pro Pro Phe Phe Pro Ser
Glu Asn Ala Ile Pro Pro Thr Phe Tyr Arg Pro Tyr Phe Arg Ile Val Arg Phe Asp
Val Ser Ala Met Glu Lys Asn Ala Ser Asn Leu Val Lys Ala Glu Phe Arg Val Phe
Arg Leu Gln Asn Pro Lys Ala Arg Val Pro Glu Gln Arg Ile Glu Leu Tyr Gln Ile
Leu Lys Ser Lys Asp Leu Thr Ser Pro Thr Gln Arg Tyr Ile Asp Ser Lys Val Val
Lys Thr Arg Ala Glu Gly Glu Trp Leu Ser Phe Asp Val Thr Asp Ala Val His Glu
Trp Leu His His Lys Asp Arg Asn Leu Gly Phe Lys Ile Ser Leu His Cys Pro Cys

Cys Thr Phe Val Pro Ser Asn Asn Tyr Ile Ile Pro Asn Lys Ser Glu Glu Leu Glu
Ala Arg Phe Ala Gly Ile Asp Gly Thr Ser Thr Tyr Thr Ser Gly Asp Gln Lys Thr
Ile Lys Ser Thr Arg Lys Lys Asn Ser Gly Lys Thr Pro His Leu Leu Leu Met Leu
Leu Pro Ser Tyr Arg Leu Glu Ser Gln Gln Thr Asn Arg Arg Lys Lys Arg Ala Leu
Asp Ala Ala Tyr Cys Phe Arg Asn Val Gln Asp Asn Cys Cys Leu Arg Pro Leu Tyr
Ile Asp Phe Lys Arg Asp Leu Gly Trp Lys Trp Ile His Glu Pro Lys Gly Tyr Asn
Ala Asn Phe Cys Ala Gly Ala Cys Pro Tyr Leu Trp Ser Ser Asp Thr Gln His Ser
Arg Val Leu Ser Leu Tyr Asn Thr Ile Asn Pro Glu Ala Ser Ala Ser Pro Cys Cys
Val Ser Gln Asp Leu Glu Pro Leu Thr Ile Leu Tyr Tyr Ile Gly Lys Thr Pro Lys
Ile Glu Gln Leu Ser Asn Met Ile Val Lys Ser Cys Lys Cys Ser

Figure 21e: Amino acid sequence of transforming growth factor beta-2 from Homo sapiens

Ala Leu Asp Ala Ala Tyr Cys Phe Arg Asn Val Gln Asp Asn Cys Cys Leu Arg Pro
Leu Tyr Ile Asp Phe Lys Arg Asp Leu Gly Trp Lys Trp Ile His Glu Pro Lys Gly
Tyr Asn Ala Asn Phe Cys Ala Gly Ala Cys Pro Tyr Leu Trp Ser Ser Asp Thr Gln
His Ser Arg Val Leu Ser Leu Tyr Asn Thr Ile Asn Pro Glu Ala Ser Ala Ser Pro
Cys Cys Val Ser Gln Asp Leu Glu Pro Leu Thr Ile Leu Tyr Tyr Ile Gly Lys Thr
Pro Lys Ile Glu Gln Leu Ser Asn Met Ile Val Lys Ser Cys Lys Cys Ser

Figure 21f: Amino acid sequence of transforming growth factor beta-3 preproprotein from Homo sapiens

Met Lys Met His Leu Gln Arg Ala Leu Val Val Leu Ala Leu Leu Asn Phe Ala Thr
Val Ser Leu Ser Leu Ser Thr Cys Thr Thr Leu Asp Phe Gly His Ile Lys Lys Lys
Arg Val Glu Ala Ile Arg Gly Gln Ile Leu Ser Lys Leu Arg Leu Thr Ser Pro Pro
Glu Pro Thr Val Met Thr His Val Pro Tyr Gln Val Leu Ala Leu Tyr Asn Ser Thr
Arg Glu Leu Leu Glu Glu Met His Gly Glu Arg Glu Glu Gly Cys Thr Gln Glu Asn
Thr Glu Ser Glu Tyr Tyr Ala Lys Glu Ile His Lys Phe Asp Met Ile Gln Gly Leu
Ala Glu His Asn Glu Leu Ala Val Cys Pro Lys Gly Ile Thr Ser Lys Val Phe Arg
Phe Asn Val Ser Ser Val Glu Lys Asn Arg Thr Asn Leu Phe Arg Ala Glu Phe Arg
Val Leu Arg Val Pro Asn Pro Ser Ser Lys Arg Asn Glu Gln Arg Ile Glu Leu Phe
Gln Ile Leu Arg Pro Asp Glu His Ile Ala Lys Gln Arg Tyr Ile Gly Gly Lys Asn
Leu Pro Thr Arg Gly Thr Ala Glu Trp Leu Ser Phe Asp Val Thr Asp Thr Val Arg
Glu Trp Leu Leu Arg Arg Glu Ser Asn Leu Gly Leu Glu Ile Ser Ile His Cys Pro
Cys His Thr Phe Gln Pro Asn Gly Asp Ile Leu Glu Asn Ile His Glu Val Met Glu
Ile Lys Phe Lys Gly Val Asp Asn Glu Asp Asp His Gly Arg Gly Asp Leu Gly Arg
Leu Lys Lys Gln Lys Asp His His Asn Pro His Leu Ile Leu Met Met Ile Pro Pro
His Arg Leu Asp Asn Pro Gly Gln Gly Gly Gln Arg Lys Lys Arg Ala Leu Asp Thr
Asn Tyr Cys Phe Arg Asn Leu Glu Glu Asn Cys Cys Val Arg Pro Leu Tyr Ile Asp
Phe Arg Gln Asp Leu Gly Trp Lys Trp Val His Glu Pro Lys Gly Tyr Tyr Ala Asn

Phe Cys Ser Gly Pro Cys Pro Tyr Leu Arg Ser Ala Asp Thr Thr His Ser Thr Val
Leu Gly Leu Tyr Asn Thr Leu Asn Pro Glu Ala Ser Ala Ser Pro Cys Cys Val Pro
Gln Asp Leu Glu Pro Leu Thr Ile Leu Tyr Tyr Val Gly Arg Thr Pro Lys Val Glu
Gln Leu Ser Asn Met Val Val Lys Ser Cys Lys Cys Ser

Figure 21g: Amino acid sequence of transforming growth factor beta-3 from Homo sapiens

Ala Leu Asp Thr Asn Tyr Cys Phe Arg Asn Leu Glu Glu Asn Cys Cys Val Arg Pro
Leu Tyr Ile Asp Phe Arg Gln Asp Leu Gly Trp Lys Trp Val His Glu Pro Lys Gly
Tyr Tyr Ala Asn Phe Cys Ser Gly Pro Cys Pro Tyr Leu Arg Ser Ala Asp Thr Thr
His Ser Thr Val Leu Gly Leu Tyr Asn Thr Leu Asn Pro Glu Ala Ser Ala Ser Pro
Cys Cys Val Pro Gln Asp Leu Glu Pro Leu Thr Ile Leu Tyr Tyr Val Gly Arg Thr
Pro Lys Val Glu Gln Leu Ser Asn Met Val Val Lys Ser Cys Lys Cys Ser

Figure 22a: Amino acid sequence of fibroblast growth factor 2 precursor from Homo sapiens

Met Val Gly Val Gly Gly Gly Asp Val Glu Asp Val Thr Pro Arg Pro Gly Gly Cys
Gln Ile Ser Gly Arg Gly Ala Arg Gly Cys Asn Gly Ile Pro Gly Ala Ala Ala Trp
Glu Ala Ala Leu Pro Arg Arg Arg Pro Arg Arg His Pro Ser Val Asn Pro Arg Ser
Arg Ala Ala Gly Ser Pro Arg Thr Arg Gly Arg Arg Thr Glu Glu Arg Pro Ser Gly
Ser Arg Leu Gly Asp Arg Gly Arg Gly Arg Ala Leu Pro Gly Gly Arg Leu Gly Gly
Arg Gly Arg Gly Arg Ala Pro Glu Arg Val Gly Gly Arg Gly Arg Gly Arg Gly Thr
Ala Ala Pro Arg Ala Ala Pro Ala Ala Arg Gly Ser Arg Pro Gly Pro Ala Gly Thr
Met Ala Ala Gly Ser Ile Thr Thr Leu Pro Ala Leu Pro Glu Asp Gly Gly Ser Gly
Ala Phe Pro Pro Gly His Phe Lys Asp Pro Lys Arg Leu Tyr Cys Lys Asn Gly Gly
Phe Phe Leu Arg Ile His Pro Asp Gly Arg Val Asp Gly Val Arg Glu Lys Ser Asp
Pro His Ile Lys Leu Gln Leu Gln Ala Glu Glu Arg Gly Val Val Ser Ile Lys Gly
Val Cys Ala Asn Arg Tyr Leu Ala Met Lys Glu Asp Gly Arg Leu Leu Ala Ser Lys
Cys Val Thr Asp Glu Cys Phe Phe Phe Glu Arg Leu Glu Ser Asn Asn Tyr Asn Thr
Tyr Arg Ser Arg Lys Tyr Thr Ser Trp Tyr Val Ala Leu Lys Arg Thr Gly Gln Tyr
Lys Leu Gly Ser Lys Thr Gly Pro Gly Gln Lys Ala Ile Leu Phe Leu Pro Met Ser
Ala Lys Ser

Figure 22b: Amino acid sequence of fragment of fibroblast growth factor 2 from Homo sapiens

Pro Ala Leu Pro Glu Asp Gly Gly Ser Gly Ala Phe Pro Pro Gly His Phe Lys Asp
Pro Lys Arg Leu Tyr Cys Lys Asn Gly Gly Phe Phe Leu Arg Ile His Pro Asp Gly
Arg Val Asp Gly Val Arg Glu Lys Ser Asp Pro His Ile Lys Leu Gln Leu Gln Ala
Glu Glu Arg Gly Val Val Ser Ile Lys Gly Val Cys Ala Asn Arg Tyr Leu Ala Met
Lys Glu Asp Gly Arg Leu Leu Ala Ser Lys Cys Val Thr Asp Glu Cys Phe Phe Phe
Glu Arg Leu Glu Ser Asn Asn Tyr Asn Thr Tyr Arg Ser Arg Lys Tyr Thr Ser Trp

Tyr Val Ala Leu Lys Arg Thr Gly Gln Tyr Lys Leu Gly Ser Lys Thr Gly Pro Gly
Gln Lys Ala Ile Leu Phe Leu Pro Met Ser Ala Lys Ser

Figure 23a: Amino acid sequence of hepatocyte growth factor from Homo sapiens

Met Trp Val Thr Lys Leu Leu Pro Ala Leu Leu Leu Gln His Val Leu Leu His Leu
Leu Leu Leu Pro Ile Ala Ile Pro Tyr Ala Glu Gly Gln Arg Lys Arg Arg Asn Thr
Ile His Glu Phe Lys Lys Ser Ala Lys Thr Thr Leu Ile Lys Ile Asp Pro Ala Leu
Lys Ile Lys Thr Lys Lys Val Asn Thr Ala Asp Gln Cys Ala Asn Arg Cys Thr Arg
Asn Lys Gly Leu Pro Phe Thr Cys Lys Ala Phe Val Phe Asp Lys Ala Arg Lys Gln
Cys Leu Trp Phe Pro Phe Asn Ser Met Ser Ser Gly Val Lys Lys Glu Phe Gly His
Glu Phe Asp Leu Tyr Glu Asn Lys Asp Tyr Ile Arg Asn Cys Ile Ile Gly Lys Gly
Arg Ser Tyr Lys Gly Thr Val Ser Ile Thr Lys Ser Gly Ile Lys Cys Gln Pro Trp
Ser Ser Met Ile Pro His Glu His Ser Phe Leu Pro Ser Ser Tyr Arg Gly Lys Asp
Leu Gln Glu Asn Tyr Cys Arg Asn Pro Arg Gly Glu Glu Gly Gly Pro Trp Cys Phe
Thr Ser Asn Pro Glu Val Arg Tyr Glu Val Cys Asp Ile Pro Gln Cys Ser Glu Val
Glu Cys Met Thr Cys Asn Gly Glu Ser Tyr Arg Gly Leu Met Asp His Thr Glu Ser
Gly Lys Ile Cys Gln Arg Trp Asp His Gln Thr Pro His Arg His Lys Phe Leu Pro
Glu Arg Tyr Pro Asp Lys Gly Phe Asp Asp Asn Tyr Cys Arg Asn Pro Asp Gly Gln
Pro Arg Pro Trp Cys Tyr Thr Leu Asp Pro His Thr Arg Trp Glu Tyr Cys Ala Ile
Lys Thr Cys Ala Asp Asn Thr Met Asn Asp Thr Asp Val Pro Leu Glu Thr Thr Glu
Cys Ile Gln Gly Gln Gly Glu Gly Tyr Arg Gly Thr Val Asn Thr Ile Trp Asn Gly
Ile Pro Cys Gln Arg Trp Asp Ser Gln Tyr Pro His Glu His Asp Met Thr Pro Glu
Asn Phe Lys Cys Lys Asp Leu Arg Glu Asn Tyr Cys Arg Asn Pro Asp Gly Ser Glu
Ser Pro Trp Cys Phe Thr Thr Asp Pro Asn Ile Arg Val Gly Tyr Cys Ser Gln Ile
Pro Asn Cys Asp Met Ser His Gly Gln Asp Cys Tyr Arg Gly Asn Gly Lys Asn Tyr
Met Gly Asn Leu Ser Gln Thr Arg Ser Gly Leu Thr Cys Ser Met Trp Asp Lys Asn
Met Glu Asp Leu His Arg His Ile Phe Trp Glu Pro Asp Ala Ser Lys Leu Asn Glu
Asn Tyr Cys Arg Asn Pro Asp Asp Asp Ala His Gly Pro Trp Cys Tyr Thr Gly Asn
Pro Leu Ile Pro Trp Asp Tyr Cys Pro Ile Ser Arg Cys Glu Gly Asp Thr Thr Pro
Thr Ile Val Asn Leu Asp His Pro Val Ile Ser Cys Ala Lys Thr Lys Gln Leu Arg
Val Val Asn Gly Ile Pro Thr Arg Thr Asn Ile Gly Trp Met Val Ser Leu Arg Tyr
Arg Asn Lys His Ile Cys Gly Gly Ser Leu Ile Lys Glu Ser Trp Val Leu Thr Ala
Arg Gln Cys Phe Pro Ser Arg Asp Leu Lys Asp Tyr Glu Ala Trp Leu Gly Ile His
Asp Val His Gly Arg Gly Asp Glu Lys Cys Lys Gln Val Leu Asn Val Ser Gln Leu
Val Tyr Gly Pro Glu Gly Ser Asp Leu Val Leu Met Lys Leu Ala Arg Pro Ala Val
Leu Asp Asp Phe Val Ser Thr Ile Asp Leu Pro Asn Tyr Gly Cys Thr Ile Pro Glu
Lys Thr Ser Cys Ser Val Tyr Gly Trp Gly Tyr Thr Gly Leu Ile Asn Tyr Asp Gly
Leu Leu Arg Val Ala His Leu Tyr Ile Met Gly Asn Glu Lys Cys Ser Gln His His
Arg Gly Lys Val Thr Leu Asn Glu Ser Glu Ile Cys Ala Gly Ala Glu Lys Ile Gly
Ser Gly Pro Cys Glu Gly Asp Tyr Gly Gly Pro Leu Val Cys Glu Gln His Lys Met
Arg Met Val Leu Gly Val Ile Val Pro Gly Arg Gly Cys Ala Ile Pro Asn Arg Pro

Gly Ile Phe Val Arg Val Ala Tyr Tyr Ala Lys Trp Ile His Lys Ile Ile Leu Thr Tyr Lys Val Pro Gln Ser

Figure 23b: Amino acid sequence of hepatocyte growth factor alpha chain from Homo sapiens

Gln Arg Lys Arg Arg Asn Thr Ile His Glu Phe Lys Lys Ser Ala Lys Thr Thr Leu Ile Lys Ile Asp Pro Ala Leu Lys Ile Lys Thr Lys Lys Val Asn Thr Ala Asp Gln Cys Ala Asn Arg Cys Thr Arg Asn Lys Gly Leu Pro Phe Thr Cys Lys Ala Phe Val Phe Asp Lys Ala Arg Lys Gln Cys Leu Trp Phe Pro Phe Asn Ser Met Ser Ser Gly Val Lys Lys Glu Phe Gly His Glu Phe Asp Leu Tyr Glu Asn Lys Asp Tyr Ile Arg Asn Cys Ile Ile Gly Lys Gly Arg Ser Tyr Lys Gly Thr Val Ser Ile Thr Lys Ser Gly Ile Lys Cys Gln Pro Trp Ser Ser Met Ile Pro His Glu His Ser Phe Leu Pro Ser Ser Tyr Arg Gly Lys Asp Leu Gln Glu Asn Tyr Cys Arg Asn Pro Arg Gly Glu Glu Gly Gly Pro Trp Cys Phe Thr Ser Asn Pro Glu Val Arg Tyr Glu Val Cys Asp Ile Pro Gln Cys Ser Glu Val Glu Cys Met Thr Cys Asn Gly Glu Ser Tyr Arg Gly Leu Met Asp His Thr Glu Ser Gly Lys Ile Cys Gln Arg Trp Asp His Gln Thr Pro His Arg His Lys Phe Leu Pro Glu Arg Tyr Pro Asp Lys Gly Phe Asp Asp Asn Tyr Cys Arg Asn Pro Asp Gly Gln Pro Arg Pro Trp Cys Tyr Thr Leu Asp Pro His Thr Arg Trp Glu Tyr Cys Ala Ile Lys Thr Cys Ala Asp Asn Thr Met Asn Asp Thr Asp Val Pro Leu Glu Thr Thr Glu Cys Ile Gln Gly Gln Gly Glu Gly Tyr Arg Gly Thr Val Asn Thr Ile Trp Asn Gly Ile Pro Cys Gln Arg Trp Asp Ser Gln Tyr Pro His Glu His Asp Met Thr Pro Glu Asn Phe Lys Cys Lys Asp Leu Arg Glu Asn Tyr Cys Arg Asn Pro Asp Gly Ser Glu Ser Pro Trp Cys Phe Thr Thr Asp Pro Asn Ile Arg Val Gly Tyr Cys Ser Gln Ile Pro Asn Cys Asp Met Ser His Gly Gln Asp Cys Tyr Arg Gly Asn Gly Lys Asn Tyr Met Gly Asn Leu Ser Gln Thr Arg Ser Gly Leu Thr Cys Ser Met Trp Asp Lys Asn Met Glu Asp Leu His Arg His Ile Phe Trp Glu Pro Asp Ala Ser Lys Leu Asn Glu Asn Tyr Cys Arg Asn Pro Asp Asp Asp Ala His Gly Pro Trp Cys Tyr Thr Gly Asn Pro Leu Ile Pro Trp Asp Tyr Cys Pro Ile Ser Arg Cys Glu Gly Asp Thr Thr Pro Thr Ile Val Asn Leu Asp His Pro Val Ile Ser Cys Ala Lys Thr Lys Gln Leu Arg

Figure 23c: Amino acid sequence of hepatocyte growth factor beta chain from Homo sapiens

Val Val Asn Gly Ile Pro Thr Arg Thr Asn Ile Gly Trp Met Val Ser Leu Arg Tyr Arg Asn Lys His Ile Cys Gly Gly Ser Leu Ile Lys Glu Ser Trp Val Leu Thr Ala Arg Gln Cys Phe Pro Ser Arg Asp Leu Lys Asp Tyr Glu Ala Trp Leu Gly Ile His Asp Val His Gly Arg Gly Asp Glu Lys Cys Lys Gln Val Leu Asn Val Ser Gln Leu Val Tyr Gly Pro Glu Gly Ser Asp Leu Val Leu Met Lys Leu Ala Arg Pro Ala Val Leu Asp Asp Phe Val Ser Thr Ile Asp Leu Pro Asn Tyr Gly Cys Thr Ile Pro Glu Lys Thr Ser Cys Ser Val Tyr Gly Trp Gly Tyr Thr Gly Leu Ile Asn Tyr Asp Gly Leu Leu Arg Val Ala His Leu Tyr Ile Met Gly Asn Glu Lys Cys Ser Gln His His

Arg Gly Lys Val Thr Leu Asn Glu Ser Glu Ile Cys Ala Gly Ala Glu Lys Ile Gly
Ser Gly Pro Cys Glu Gly Asp Tyr Gly Gly Pro Leu Val Cys Glu Gln His Lys Met
Arg Met Val Leu Gly Val Ile Val Pro Gly Arg Gly Cys Ala Ile Pro Asn Arg Pro
Gly Ile Phe Val Arg Val Ala Tyr Tyr Ala Lys Trp Ile His Lys Ile Ile Leu Thr
Tyr Lys Val Pro Gln Ser

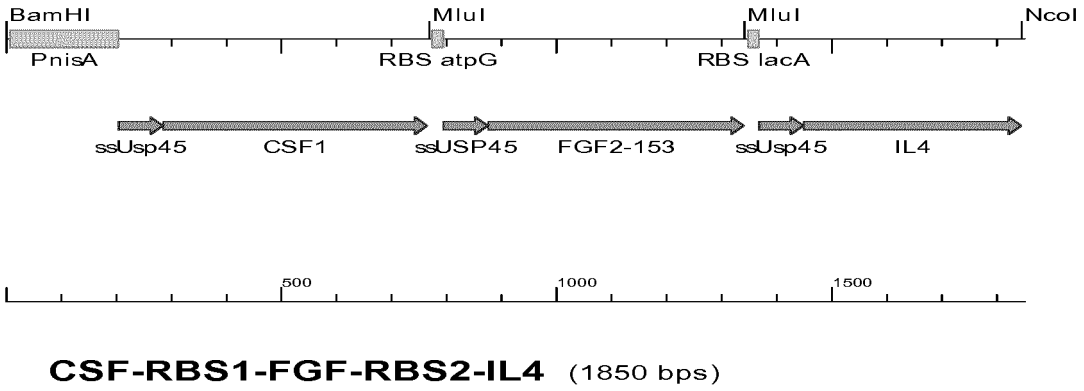
Figure 24a

ATAAATTAT**AAGGAGG**CACTCACC **ATG**... *nisA* gene
3′tct**ttcctcc**actagg 5′ 3′ end 16S rDNA

TATT**A**AT**AAGGAGG**CT**A**A**C**TA **ATG**... *atpG* gene
3′**t**ct**ttcctcc**ac**t**a**g**g 5′ 3′ end of 16S rDNA

AA**A**TTT**AGGAGGT**AG**TCC**AA **ATG**... *lacA* gene
3′**t**ctt**tcctcca**ct**agg** 5′ 3′ end of 16S rDNA

Figure 24b

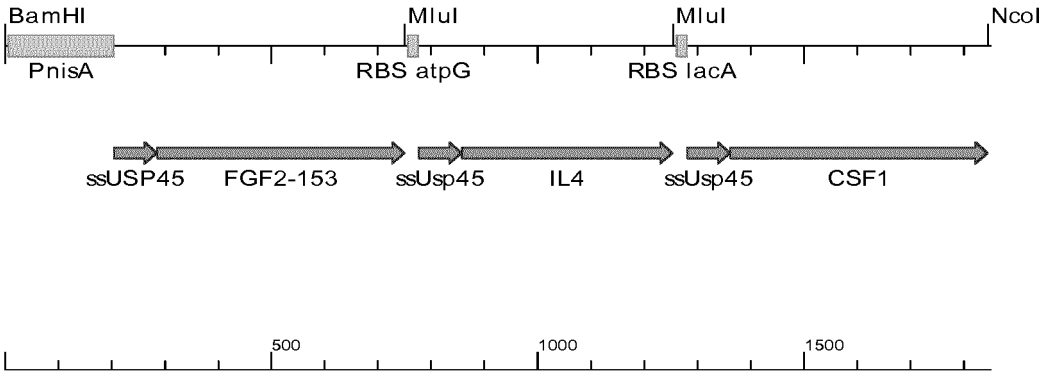


CSF-RBS1-FGF-RBS2-IL4 (1850 bps)

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GCGATTTTGATGTCAACGGTTATTTTAAGCGCAGCAGCTCCATTATCTGGAGTTTATGCAGCAGAAGAAGTTAGT
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Figure 24c

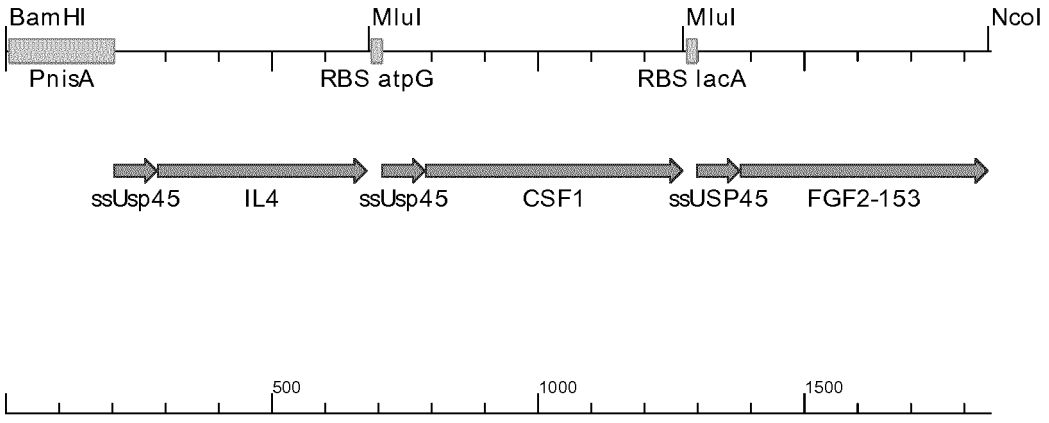


FGF-RBS1-IL4-RBS2-CSF (1850 bps)

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Figure 24d

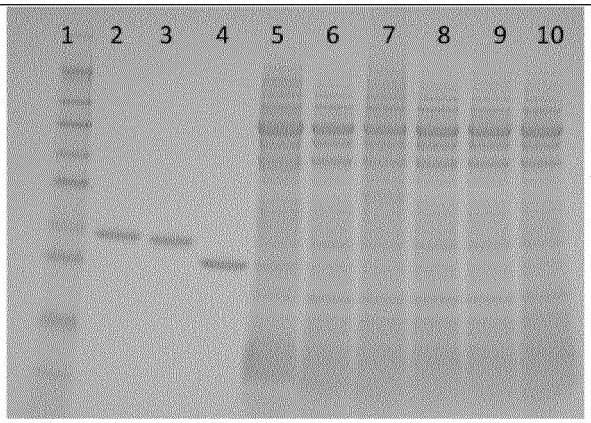


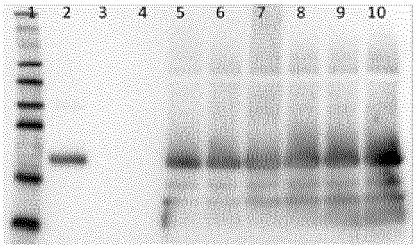
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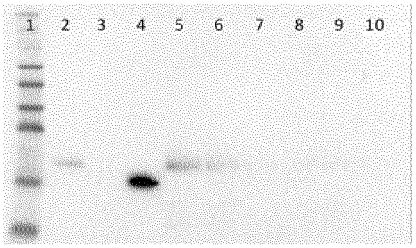
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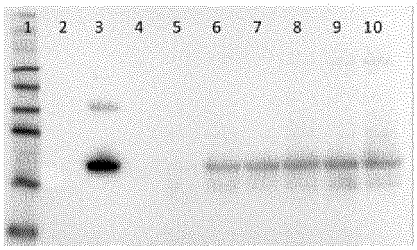
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Figure 24e:





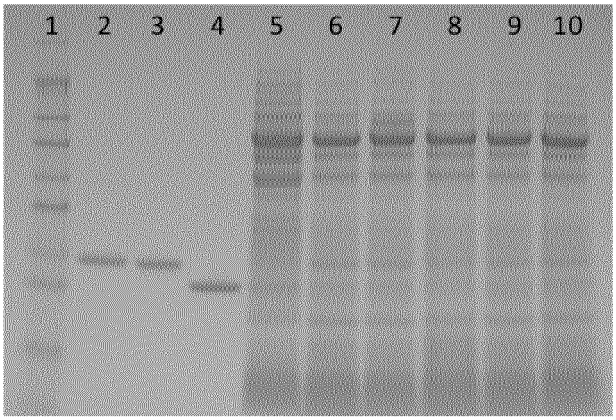




Lane	Sample		
	1 SeeBlue marker		10 µl
	2 FGF-2		1 µg
	3 CSF1		1 µg
	4 IL4		1 µg
	5 Sup #1 not induced	Run4-F01 T=4	
	6 Sup #1 induced	Run4-F02 T=4	
		-F03 T=4	
		-F04 T=4	
		-F05 T=4	
		-F06 T=4	

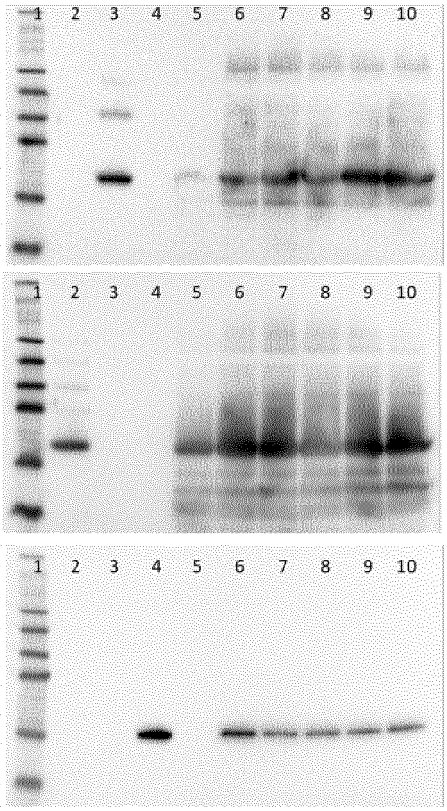
For the WB gels 0.1 µg reference protein was used

Figure 24f:

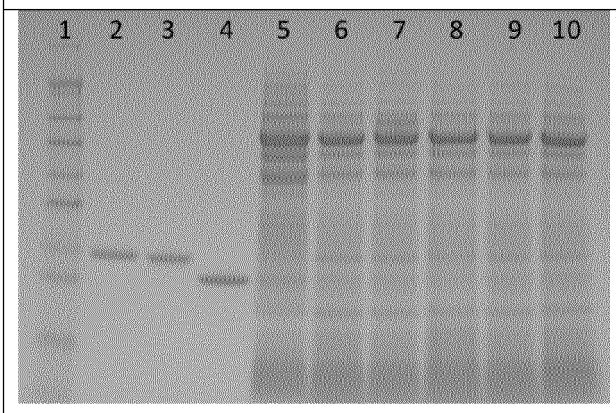


Lane	Sample		
	1 SeeBlue marker		10 µl
	2 FGF-2		1 µg
	3 CSF1		1 µg
	4 IL4		1 µg
	5 Sup #1 not induced	Run4-F07 T=4	
	6 Sup #1 induced	Run4-F08 T=4	
		-F09 T=4	
		-F10 T=4	
		-F11 T=4	
		-F12 T=4	

For the WB gels 0.1 µg reference protein was used



Figur 24g:



Lane	Sample		
	1 SeeBlue marker		10 µl
	2 FGF-2		1 µg
	3 CSF1		1 µg
	4 IL4		1 µg
	5 Sup #1 not induced	Run4-F07 T=4	
	6 Sup #1 induced	Run4-F08 T=4	
		-F09 T=4	
		-F10 T=4	
		-F11 T=4	
		-F12 T=4	

For the WB gels 0.1 µg reference protein was used

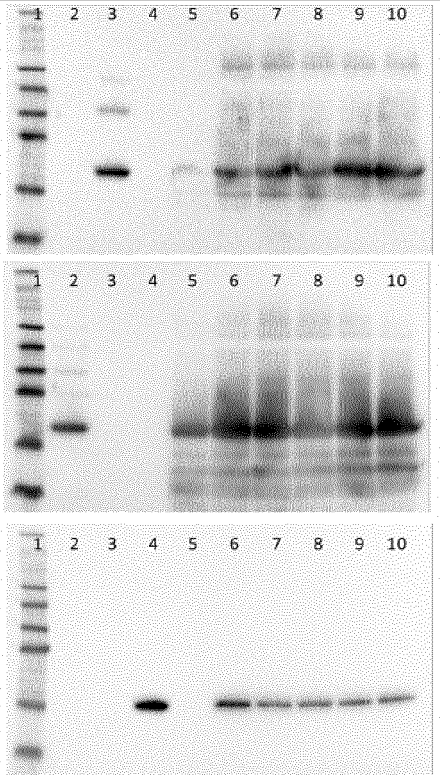


Figure 25a: Amino acid sequence of epidermal growth factor isoform 1 preproprotein from Homo sapiens

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VFLNGSRQER VCNIEKNVSG MAINWINEEV IWSNQQEGII TVTDMKGNNS
HILLSALKYP ANVAVDPVER FIFWSSEVAG SLYRADLDGV GVKALLETSE
KITAVSLDVL DKRLFWIQYN REGSNSLICS CDYDGGSVHI SKHPTQHNLF
AMSLFGDRIF YSTWKMKTIW IANKHTGKDM VRINLHSSFV PLGELKVVHP
LAQPKAEDDT WEPEQKLCKL RKGNCSSTVC GQDLQSHLCM CAEGYALSRD
RKYCEDVNEC AFWNHGCTLG CKNTPGSYYC TCPVGFVLLP DGKRCHQLVS
CPRNVSECSH DCVLTSEGPL CFCPEGSVLE RDGKTCSGCS SPDNGGCSQL
CVPLSPVSWE CDCFPGYDLQ LDEKSCAASG PQPFLLFANS QDIRHMHFDG
TDYGTLLSQQ MGMVYALDHD PVENKIYFAH TALKWIERAN MDGSQRERLI
EEGVDVPEGL AVDWIGRRFY WTDRGKSLIG RSDLNGKRSK IITKENISQP
RGIAVHPMAK RLFWTDTGIN PRIESSSLQG LGRLVIASSD LIWPSGITID
FLTDKLYWCD AKQSVIEMAN LDGSKRRRLT QNDVGHPFAV AVFEDYVWFS
DWAMPSVMRV NKRTGKDRVR LQGSMLKPSS LVVVHPLAKP GADPCLYQNG
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EDATCQCLKG FAGDGKLCSD IDECEMGVPV CPPASSKCIN TEGGYVCRCS
EGYQGDGIHC LDIDECQLGE HSCGENASCT NTEGGYTCMC AGRLSEPGLI
CPDSTPPPHL REDDHHYSVR NSDSECPLSH DGYCLHDGVC MYIEALDKYA
CNCVVGYIGE RCQYRDLKWW ELRHAGHGQQ QKVIVVAVCV VVLVMLLLLS
LWGAHYYRTQ KLLSKNPKNP YEESSRDVRS RRPADTEDGM SSCPQPWFVV
IKEHQDLKNG GQPVAGEDGQ AADGSMQPTS WRQEPQLCGM GTEQGCWIPV
SSDKGSCPQV MERSFHMPSY GTQTLEGGVE KPHSLLSANP LWQQRALDPP
HQMELTQ

Figure 25b: Amino acid sequence of epidermal growth factor isoform 2 preproprotein from Homo sapiens

MLLTLIILLP VVSKFSFVSL SAPQHWSCPE GTLAGNGNST CVGPAPFLIF
SHGNSIFRID TEGTNYEQLV VDAGVSVIMD FHYNEKRIYW VDLERQLLQR
VFLNGSRQER VCNIEKNVSG MAINWINEEV IWSNQQEGII TVTDMKGNNS
HILLSALKYP ANVAVDPVER FIFWSSEVAG SLYRADLDGV GVKALLETSE
KITAVSLDVL DKRLFWIQYN REGSNSLICS CDYDGGSVHI SKHPTQHNLF
AMSLFGDRIF YSTWKMKTIW IANKHTGKDM VRINLHSSFV PLGELKVVHP
LAQPKAEDDT WEPDVNECAF WNHGCTLGCK NTPGSYYCTC PVGFVLLPDG
KRCHQLVSCP RNVSECSHDC VLTSEGPLCF CPEGSVLERD GKTCSGCSSP
DNGGCSQLCV PLSPVSWECD CFPGYDLQLD EKSCAASGPQ PFLLFANSQD
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FEDYVWFSDW AMPSVMRVNK RTGKDRVRLQ GSMLKPSSLV VVHPLAKPGA
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YARCISEGED ATCQCLKGFA GDGKLCSDID ECEMGVPVCP PASSKCINTE
GGYVCRCSEG YQGDGIHCLD IDECQLGEHS CGENASCTNT EGGYTCMCAG

RLSEPGLICP DSTPPPHLRE DDHHYSVRNS DSECPLSHDG YCLHDGVCMY
IEALDKYACN CVVGYIGERC QYRDLKWWEL RHAGHGQQQK VIVVAVCVVV
LVMLLLLSLW GAHYYRTQKL LSKNPKNPYE ESSRDVRSRR PADTEDGMSS
CPQPWFVVIK EHQDLKNGGQ PVAGEDGQAA DGSMQPTSWR QEPQLCGMGT
EQGCWIPVSS DKGSCPQVME RSFHMPSYGT QTLEGGVEKP HSLLSANPLW
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Figure 25c: Amino acid sequence of epidermal growth factor isoform 3 preproprotein from Homo sapiens

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AMSLFGDRIF YSTWKMKTIW IANKHTGKDM VRINLHSSFV PLGELKVVHP
LAQPKAEDDT WEPEQKLCKL RKGNCSSTVC GQDLQSHLCM CAEGYALSRD
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CPRNVSECSH DCVLTSEGPL CFCPEGSVLE RDGKTCSGCS SPDNGGCSQL
CVPLSPVSWE CDCFPGYDLQ LDEKSCAASG PQPFLLFANS QDIRHMHFDG
TDYGTLLSQQ MGMVYALDHD PVENKIYFAH TALKWIERAN MDGSQRERLI
EEGVDVPEGL AVDWIGRRFY WTDRGKSLIG RSDLNGKRSK IITKENISQP
RGIAVHPMAK RLFWTDTGIN PRIESSSLQG LGRLVIASSD LIWPSGITID
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EDATCQCLKG FAGDGKLCSD IDECEMGVPV CPPASSKCIN TEGGYVCRCS
EGYQGDGIHC LDSTPPPHLR EDDHHYSVRN SDSECPLSHD GYCLHDGVCM
YIEALDKYAC NCVVGYIGER CQYRDLKWWE LRHAGHGQQQ KVIVVAVCVV
VLVMLLLLSL WGAHYYRTQK LLSKNPKNPY EESSRDVRSR RPADTEDGMS
SCPQPWFVVI KEHQDLKNGG QPVAGEDGQA ADGSMQPTSW RQEPQLCGMG
TEQGCWIPVS SDKGSCPQVM ERSFHMPSYG TQTLEGGVEK PHSLLSANPL
WQQRALDPPH QMELTQ

Figure 25d: Amino acid sequence of the mature epidermal growth factor from Homo sapiens

NSDSECPLSH DGYCLHDGVC MYIEALDKYA CNCVVGYIGE RCQYRDLKWW
ELR

Figure 26a: Amino acid sequence of the heparin-binding EGF-like growth factor precursor from Homo sapiens

MKLLPSVVLK LFLAAVLSAL VTGESLERLR RGLAAGTSNP DPPTVSTDQL
LPLGGGRDRK VRDLQEADLD LLRVTLSSKP QALATPNKEE HGKRKKKGKG
LGKKRDPCLR KYKDFCIHGE CKYVKELRAP SCICHPGYHG ERCHGLSLPV
ENRLYTYDHT TILAVVAVVL SSVCLLVIVG LLMFRYHRRG GYDVENEEKV
KLGMTNSH

Figure 26b: Amino acid sequence of the mature heparin-binding EGF-like growth factor from Homo sapiens

DLQEADLDLL RVTLSSKPQA LATPNKEEHG KRKKKGKGLG KKRDPCLRKY
KDFCIHGECK YVKELRAPSC ICHPGYHGER CHGLSL

Figure 27a: Amino acid sequence of transforming growth factor alpha isoform 1 preproprotein from Homo sapiens

MVPSAGQLAL FALGIVLAAC QALENSTSPL SADPPVAAAV VSHFNDCPDS
HTQFCFHGTC RFLVQEDKPA CVCHSGYVGA RCEHADLLAV VAASQKKQAI
TALVVVSIVA LAVLIITCVL IHCCQVRKHC EWCRALICRH EKPSALLKGR
TACCHSETVV

Figure 27b: Amino acid sequence of transforming growth factor alpha isoform 2 preproprotein from Homo sapiens

MVPSAGQLAL FALGIVLAAC QALENSTSPL SDPPVAAAVV SHFNDCPDSH
TQFCFHGTCR FLVQEDKPAC VCHSGYVGAR CEHADLLAVV AASQKKQAIT
ALVVVSIVAL AVLIITCVLI HCCQVRKHCE WCRALICRHE KPSALLKGRT
ACCHSETVV

Figure 27c: Amino acid sequence of transforming growth factor alpha isoform 3 preproprotein from Homo sapiens

MVPSAGQLAL FALGIVLAAC QALENSTSPL SDPPVAAAVV SHFNDCPDSH
TQFCFHGTCR FLVQEDKPAC VCHSGYVGAR CEHADLLAVV AASQKKQAIT
ALVVVSIVAL AVLIITCVLI HCCQVRKHCE WCRALICRHE KPSALLKGRT
ACCHSETATL G

Figure 27d: Amino acid sequence of transforming growth factor alpha isoform 4 preproprotein from Homo sapiens

MVPSAGQLAL FALGIVLAAC QALENSTSPL SADPPVAAAV VSHFNDCPDS
HTQFCFHGTC RFLVQEDKPA CVCHSGYVGA RCEHADLLAV VAASQKKQAI
TALVVVSIVA LAVLIITCVL IHCCQVRKHC EWCRALICRH EKPSALLKGR
TACCHSETGC RLY

Figure 27e: Amino acid sequence of transforming growth factor alpha isoform 5 preproprotein from Homo sapiens

MVPSAGQLAL FALGIVLAAC QALENSTSPL SDPPVAAAVV SHFNDCPDSH
TQFCFHGTCR FLVQEDKPAC VCHSGYVGAR CEHADLLAVV AASQKKQAIT
ALVVVSIVAL AVLIITCVLI HCCQVRKHCE WCRALICRHE KPSALLKGRT
ACCHSETGCR LY

Figure 27f: Amino acid sequence of the mature transforming growth factor alpha from Homo sapiens

VVSHFNDCPD SHTQFCFHGT CRFLVQEDKP ACVCHSGYVG ARCEHADLLA

Figure 28a: Amino acid sequence of amphiregulin preproprotein from Homo sapiens

MRAPLLPPAP VVLSLLILGS GHYAAGLDLN DTYSGKREPF SGDHSADGFE
VTSRSEMSSG SEISPVSEMP SSSEPSSGAD YDYSEEYDNE PQIPGYIVDD
SVRVEQVVKP PQNKTESENT SDKPKRKKKG GKNGKNRRNR KKKNPCNAEF
QNFCIHGECK YIEHLEAVTC KCQQEYFGER CGEKSMKTHS MIDSSLSKIA
LAAIAAFMSA VILTAVAVIT VQLRRQYVRK YEGEAEERKK LRQENGNVHA
IA

Figure 28b: Amino acid sequence of the mature amphiregulin from Homo sapiens

SVRVEQVVKP PQNKTESENT SDKPKRKKKG GKNGKNRRNR KKKNPCNAEF
QNFCIHGECK YIEHLEAVTC KCQQEYFGER CGEKSMK

Figure 29a: Amino acid sequence of epiregulin preproprotein from Homo sapiens

MTAGRRMEML CAGRVPALLL CLGFHLLQAV LSTTVIPSCI PGESSDNCTA
LVQTEDNPRV AQVSITKCSS DMNGYCLHGQ CIYLVDMSQN YCRCEVGYTG
VRCEHFFLTV HQPLSKEYVA LTVILIILFL ITVVGSTYYF CRWYRNRKSK
EPKKEYERVT SGDPELPQV

Figure 29b: Amino acid sequence of the mature epiregulin from Homo sapiens

VAQVSITKCS SDMNGYCLHG QCIYLVDMSQ NYCRCEVGYT GVRCEHFFL

Figure 30a: Amino acid sequence of the epigen isoform 1 precursor from Homo sapiens

MALGVPISVY LLFNAMTALT EEAAVTVTPP ITAQQGNWTV NKTEADNIEG
PIALKFSHLC LEDHNSYCIN GACAFHHELE KAICRCFTGY TGERCEHLTL
TSYAVDSYEK YIAIGIGVGL LLSGFLVIFY CYIRKRCLKL KSPYNVCSGE
RRPL

Figure 30b: Amino acid sequence of the epigen isoform 2 precursor from Homo sapiens

MALGVPISVY LLFNAMTALT EEAAVTVTPP ITAQQADNIE GPIALKFSHL
CLEDHNSYCI NGACAFHHEL EKAICRCFTG YTGERCEHLT LTSYAVDSYE
KYIAIGIGVG LLLSGFLVIF YCYIRKRYEK DKI

Figure 30c: Amino acid sequence of the epigen isoform 3 precursor from Homo sapiens

MALGVPISVY LLFNAMTALT EEAAVTVTPP ITAQQGNWTV NKTEADNIEG
PIALKFSHLC LEDHNSYCIN GACAFHHELE KAICRCFTGY TGERCLKLKS
PYNVCSGERR PL

Figure 30d: Amino acid sequence of the epigen isoform 4 precursor from Homo sapiens

MALGVPISVY LLFNAMTALT EEAAVTVTPP ITAQQGNWTV NKTEADNIEG
PIALKFSHLC LEDHNSYCIN GACAFHHELE KAICRCLKLK SPYNVCSGER
RPL

Figure 30e: Amino acid sequence of the epigen isoform 5 precursor from Homo sapiens

MALGVPISVY LLFNAMTALT EEAAVTVTPP ITAQQADNIE GPIALKFSHL
CLEDHNSYCI NGACAFHHEL EKAICRCFTG YTGERCLKLK SPYNVCSGER
RPL

Figure 30f: Amino acid sequence of the epigen isoform 6 precursor from Homo sapiens

MALGVPISVY LLFNAMTALT EEAAVTVTPP ITAQQADNIE GPIALKFSHL
CLEDHNSYCI NGACAFHHEL EKAICRCLKL KSPYNVCSGE RRPL

Figure 30g: Amino acid sequence of the epigen isoform 7 precursor from Homo sapiens

MALGVPISVY LLFNADNIEG PIALKFSHLC LEDHNSYCIN GACAFHHELE
KAICRCLKLK SPYNVCSGER RPL

Figure 30h: Amino acid sequence of the mature epigen from Homo sapiens

AAVTVTPPIT AQQGNWTVNK TEADNIEGPI ALKFSHLCLE DHNSYCINGA
CAFHHELEKA ICRCFTGYTG ERCEHLTLTS YAVDSYEKYI AIGIGVGLLL
SGFLVIFYCY IRKRCLKLKS PYNVCSGERR PL

Figure 31a: Amino acid sequence of the betacellulin precursor from Homo sapiens

MDRAARCSGA SSLPLLLALA LGLVILHCVV ADGNSTRSPE TNGLLCGDPE
ENCAATTTQS KRKGHFSRCP KQYKHYCIKG RCRFVVAEQT PSCVCDEGYI
GARCERVDLF YLRGDRGQIL VICLIAVMVV FIILVIGVCT CCHPLRKRRK
RKKKEEEMET LGKDITPINE DIEETNIA

Figure 31b: Amino acid sequence of the mature betacellulin from Homo sapiens

DGNSTRSPET NGLLCGDPEE NCAATTTQSK RKGHFSRCPK QYKHYCIKGR
CRFVVAEQTP SCVCDEGYIG ARCERVDLFY

Figure 32a: Amino acid sequence of the mature fibroblast growth factor 2 from Homo sapiens

MAAGSITTLP ALPEDGGSGA FPPGHFKDPK RLYCKNGGFF LRIHPDGRVD
GVREKSDPHI KLQLQAEERG VVSIKGVCAN RYLAMKEDGR LLASKCVTDE
CFFFERLESN NYNTYRSRKY TSWYVALKRT GQYKLGSKTG PGQKAILFLP
MSAKS

Figure 32b: Amino acid sequence of the fibroblast growth factor 2 variant hFGF2-153 used in the Examples

AGSITTLPAL PEDGGSGAFP PGHFKDPKRL YCKNGGFFLR IHPDGRVDGV
REKSDPHIKL QLQAEERGVV SIKGVCANRY LAMKEDGRLL ASKCVTDECF
FFERLESNNY NTYRSRKYTS WYVALKRTGQ YKLGSKTGPG QKAILFLPMS
AKS

Figure 33: Amino acid sequence of the human interleukin 4 (hIL-4) variant used in the Examples

AHKCDITLQE IIKTLNSLTE QKTLCTELTV TDIFAASKNT TEKETFCRAA
TVLRQFYSHH EKDTRCLGAT AQQFHRHKQL IRFLKRLDRN LWGLAGLNSC
PVKEANQSTL ENFLERLKTI MREKYSKCSS

Figure 34: Amino acid sequence of the human colony stimulating factor 1 (hCSF-1) variant used in the Examples

AEEVSEYCSH MIGSGHLQSL QRLIDSQMET SCQITFEFVD QEQLKDPVCY
LKKAFLLVQD IMEDTMRFRD NTPNAIAIVQ LQELSLRLKS CFTKDYEEHD
KACVRTFYET PLQLLEKVKN VFNETKNLLD KDWNIFSKNC NNSFAECSSQ
GHERQSEGS

Figure 35: Amino acid sequence of the secretion signal of the Lactococcus protein Usp45 used in the Examples

MKKKIISAIL MSTVILSAAA PLSGVYA