Figure 1

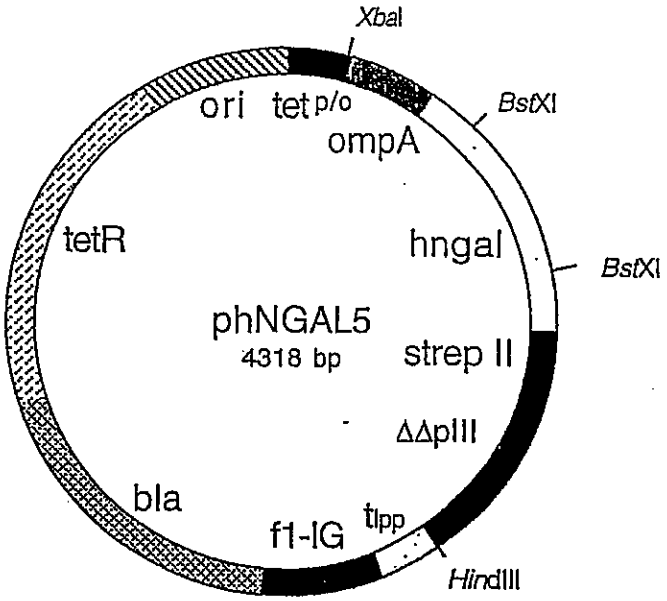
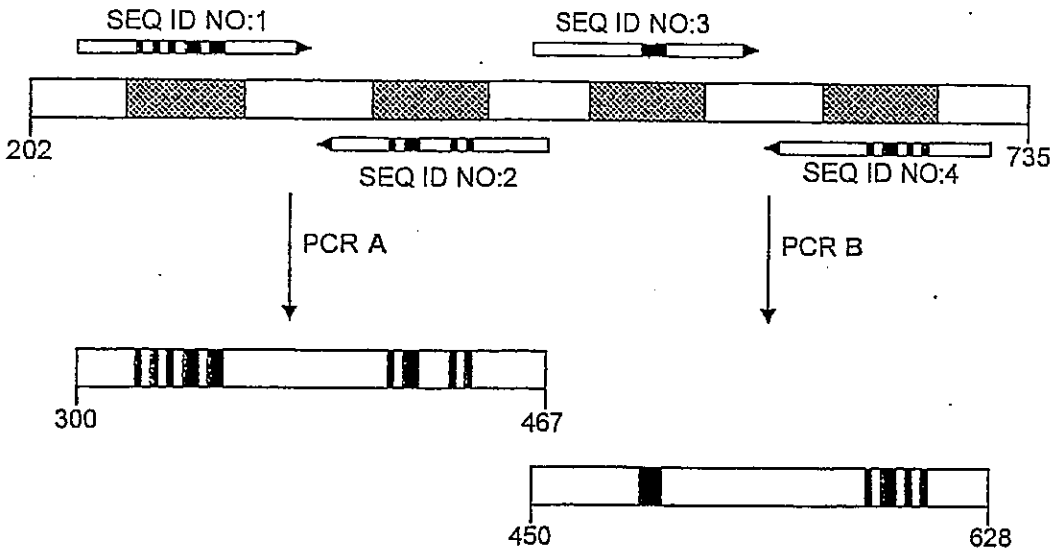

XbaI
ori
tet p/o
ompA
BstXI
tetR
hngal
BstXI
phNGAL5
4318 bp
strep II
ΔΔpIII
bla
f1-IG
tlpp
HindIII

Figure 2

1. PCR



2. PCR

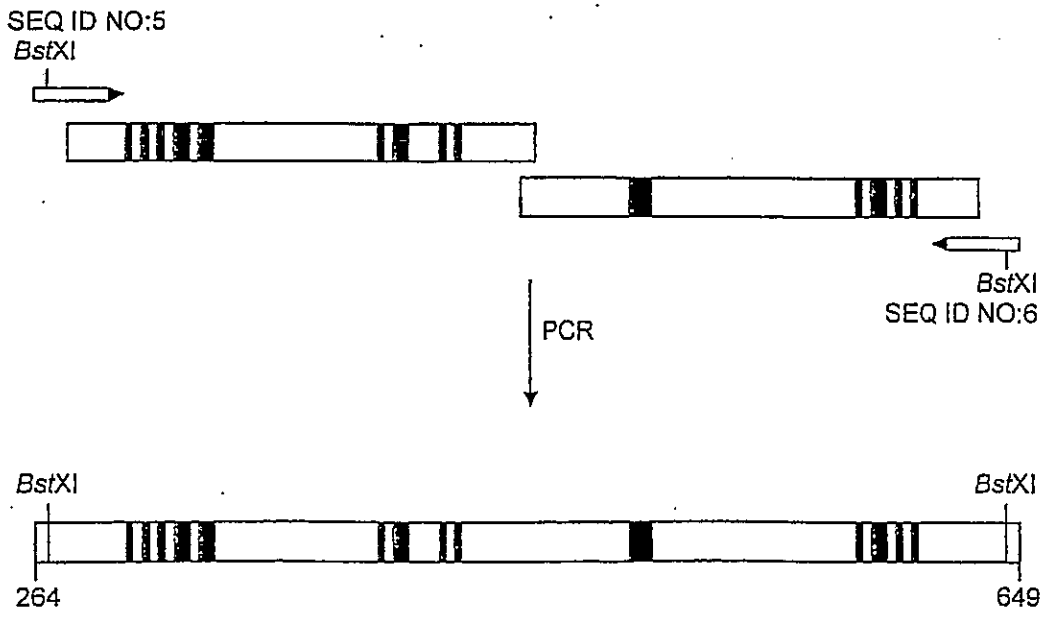


Figure 3

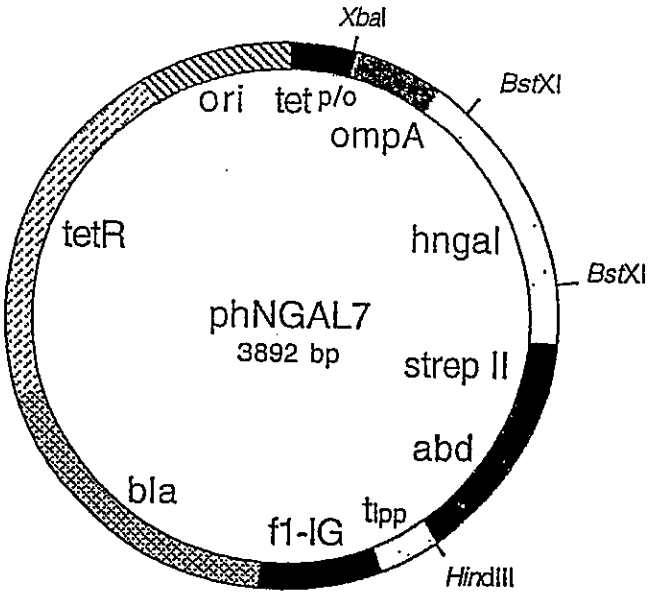

XbaI
BstXI
ori
tet p/o
ompA
tetR
hngal
BstXI
phNGAL7
3892 bp
strep II
abd
bla
tipp
f1-IG
HindIII

Figure 4

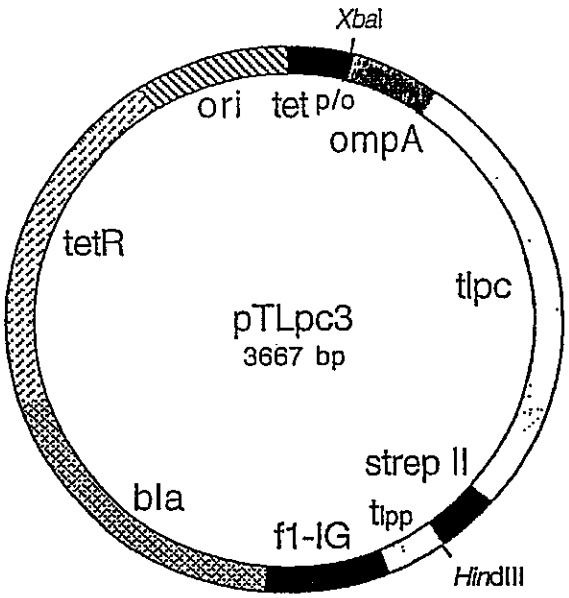

XbaI
ori
tet p/o
ompA
tetR
tlpc
pTLpc3
3667 bp
strep II
bla
tlpp
f1-IG
HindIII

Figure 5

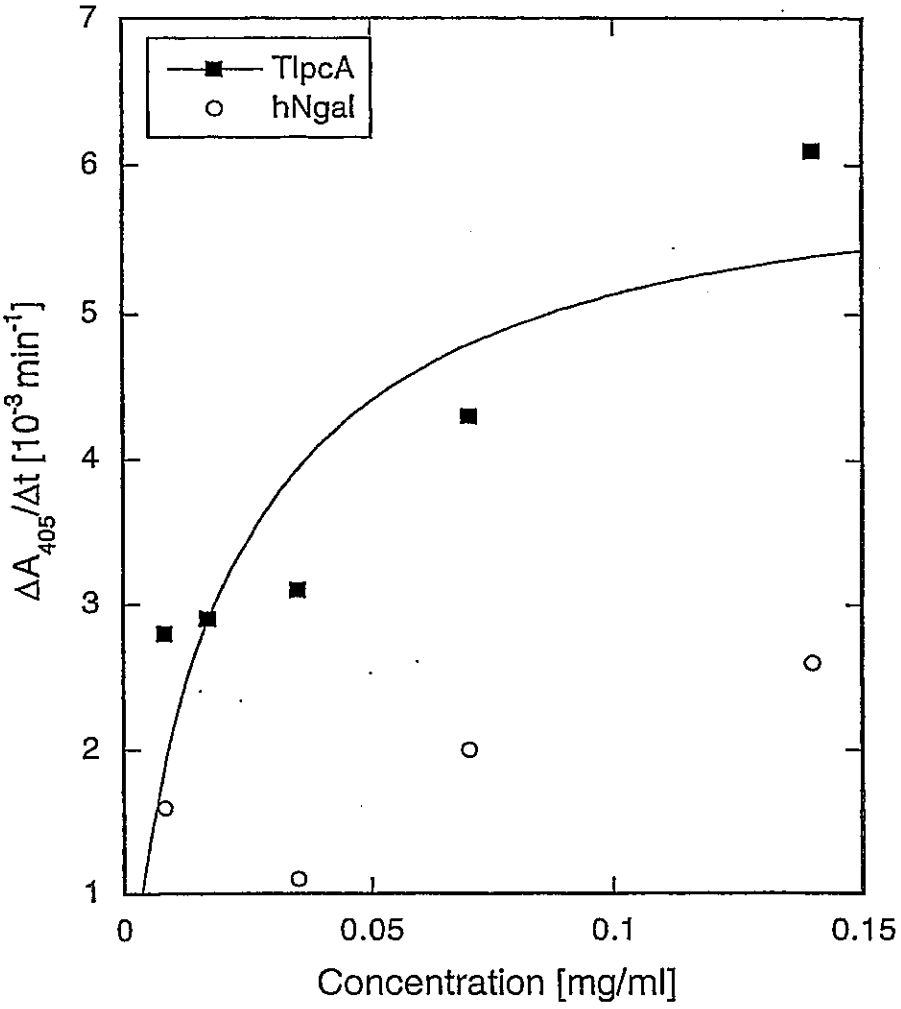

TIpcA
hNgal
7
6
5
4
3
2
1
0
0.05
0.1
0.15
$\Delta A_{405}/\Delta t$ [10^{-3} min^{-1}]
Concentration [mg/ml]

Figure 6

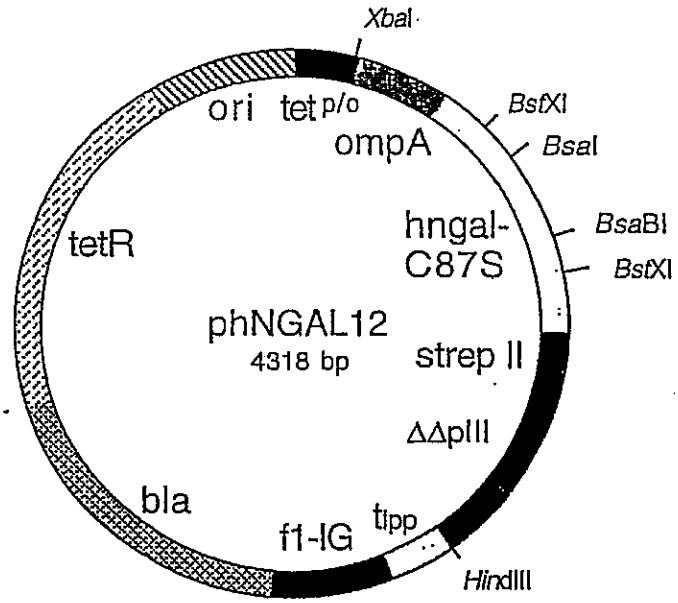

XbaI
ori
tet p/o
ompA
BstXI
BsaI
hngal-
C87S
BsaBI
BstXI
tetR
phNGAL12
4318 bp
strep II
ΔΔpIII
bla
f1-IG
tipp
HindIII

Figure 7

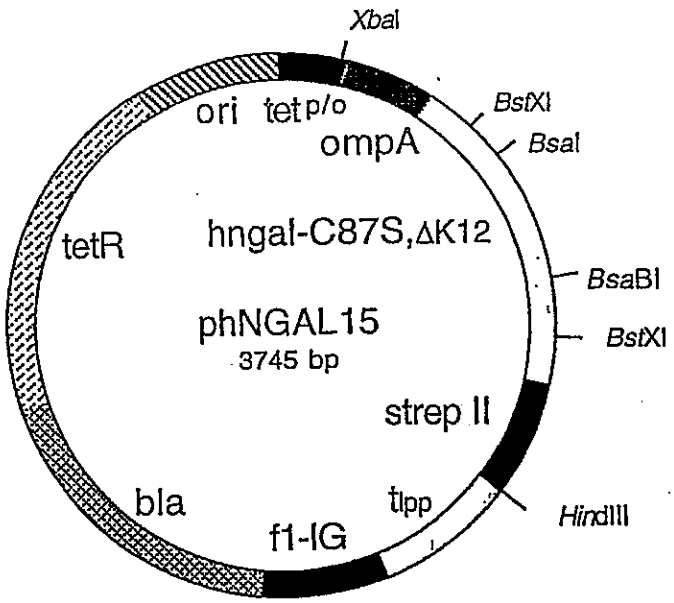
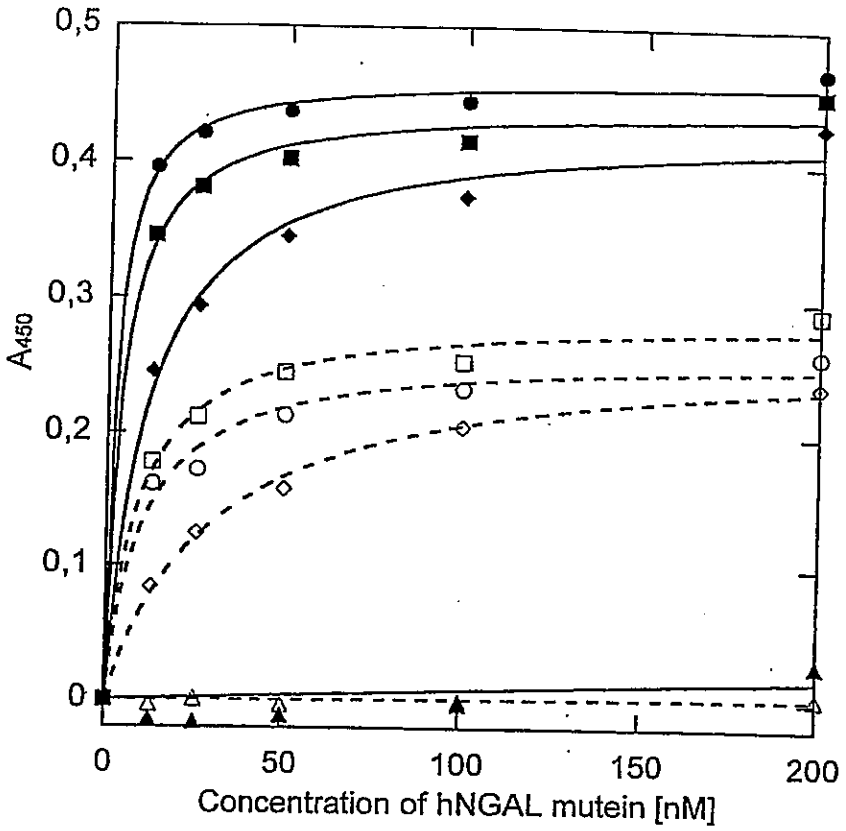
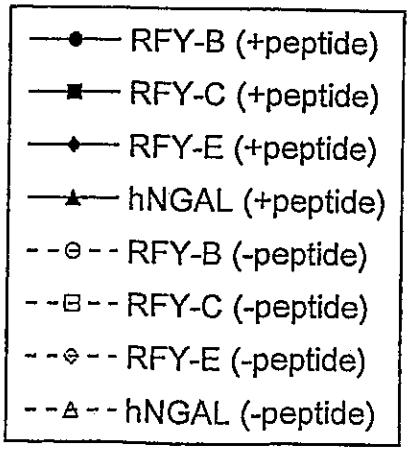

XbaI
ori
tet p/o
ompA
BstXI
BsaI
tetR
hngal-C87S,ΔK12
BsaBI
BstXI
phNGAL15
3745 bp
strep II
bla
tlpp
HindIII
f1-IG

Figure 8


0,5
0,4
0,3
0,2
0,1
0
A450
0
50
100
150
200
Concentration of hNGAL mutein [nM]


RFY-B (+peptide)
RFY-C (+peptide)
RFY-E (+peptide)
hNGAL (+peptide)
RFY-B (-peptide)
RFY-C (-peptide)
RFY-E (-peptide)
hNGAL (-peptide)

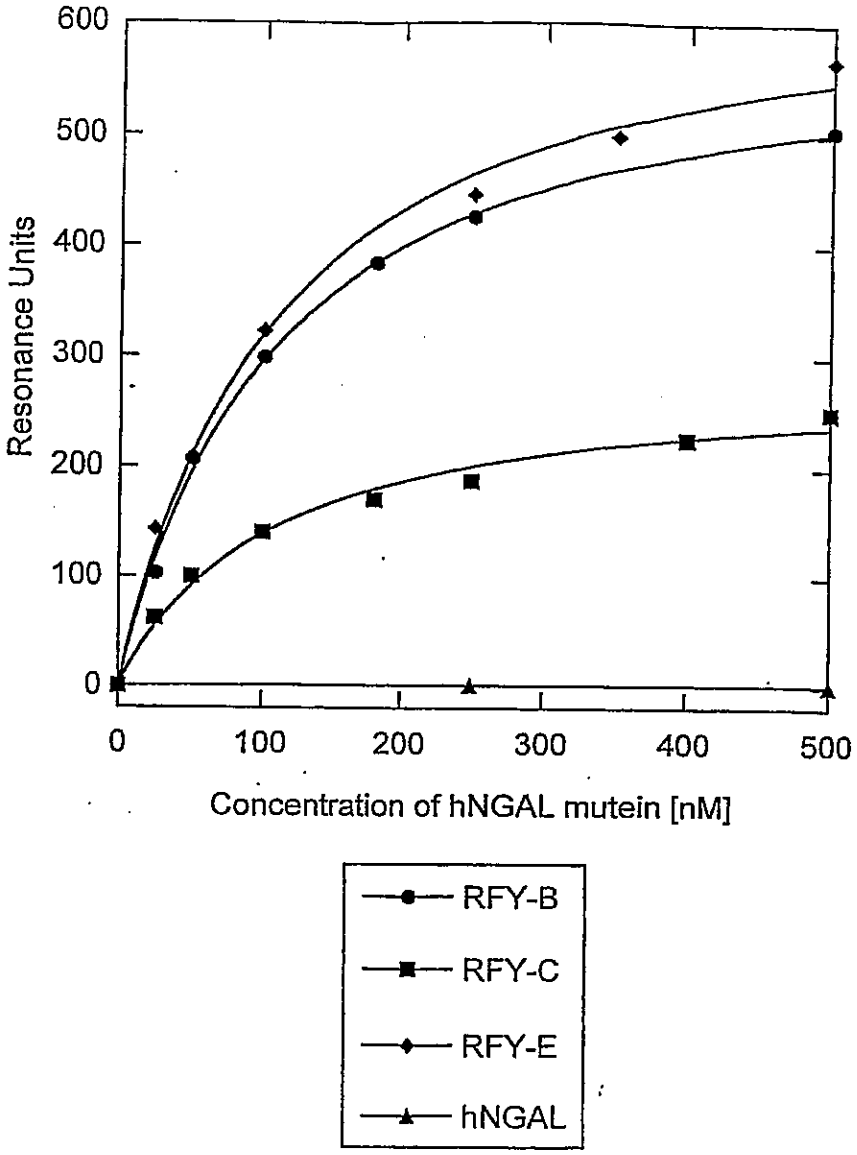
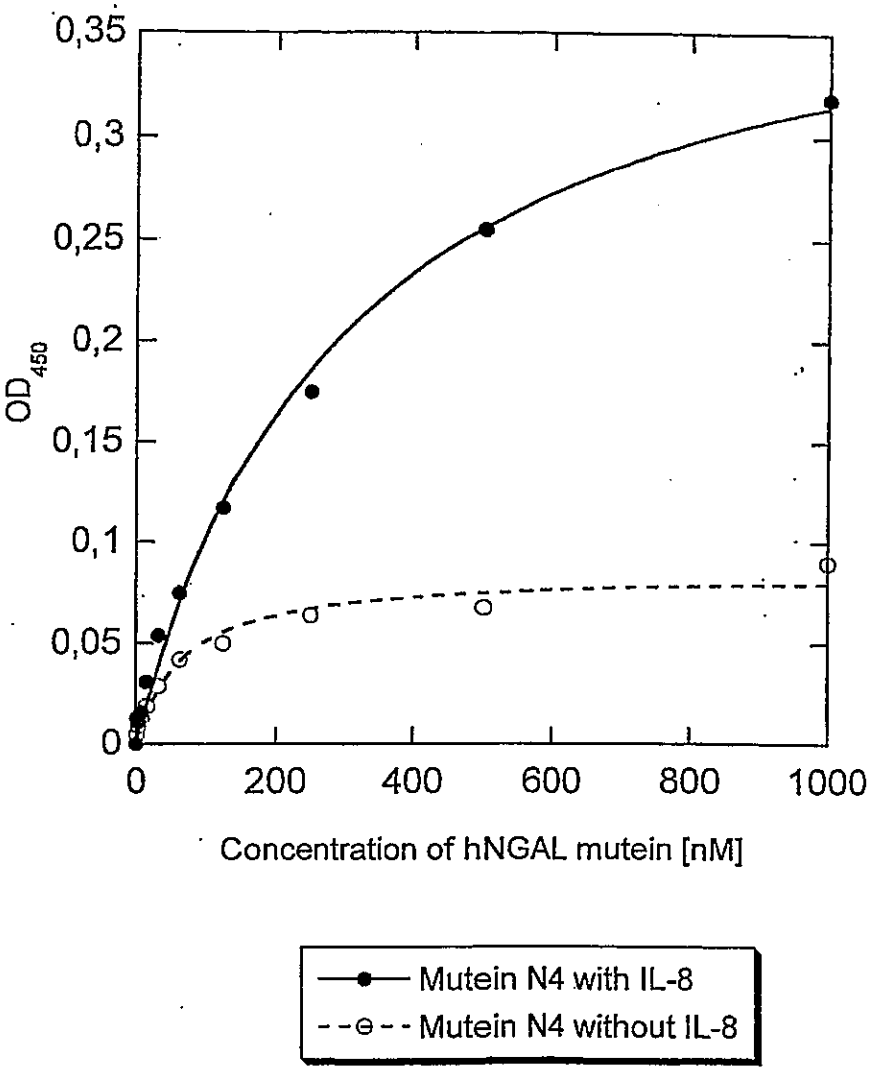
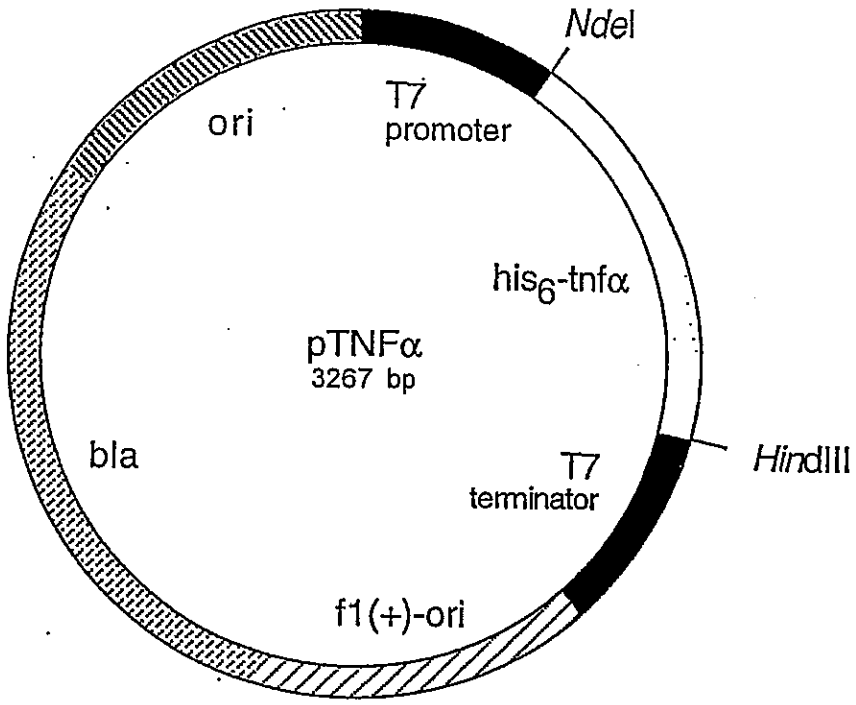
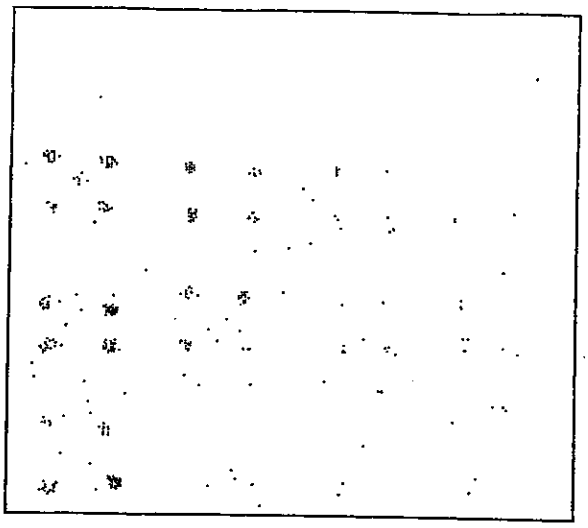

600
500
400
300
200
100
0
Resonance Units
0
100
200
300
400
500
Concentration of hNGAL mutein [nM]
RFY-B
RFY-C
RFY-E
hNGAL

Figure 10


0,35
0,3
0,25
0,2
0,15
0,1
0,05
0
OD450
0
200
400
600
800
1000
Concentration of hNGAL mutein [nM]
Mutein N4 with IL-8
Mutein N4 without IL-8


NdeI
T7
promoter
ori
his6-tnfα
pTNFα
3267 bp
bla
T7
terminator
HindIII
f1(+)-ori

(A)



(B)

hNGAL	BBP	unrelated hNGAL mutein	unrelated hNGAL mutein
TNF-V1	TNF-V1	TNF-V1	TNF-V1
TNF-V1	TNF-V1	TNF-V2	TNF-V1
TNF-V1	hNGAL	BBP	no mutein expressed