IL-22 Amino Acid Sequences Alignment

```
Human (Q9GZX6)              apisshcrldksnfqqpyitnrtfmlakeasladnntdvrligeklfhgvsmsercylmk  60
Chimpanzee (XP_003313906)   apisshcrldkssfqqpyitnrtfmlakeasladnntdvrligeklfhgvsmsercylmk
Orangutan (XP_002823544)    apisshcrldksnfqqpyitnrtfmlakeasladnntdvrligeklfrgvsmsercylmk
Mouse (Q9JJY9)              lpvntrcklevsnfqqpyivnrtfmlakeasladnntdvrligeklfrgvsakdqcylmk
Dog (XP_538274)             lpisshcrldksnfqqpyitnrtfmlakeasladnntdvrligeklfhgvnmgercylml
                             *    * *  * ****** ***************************** **     *****

Human (Q9GZX6)              qvlnftleevlfpqsdrfqpymqevvpflarlsnrlstchiegddlhiqrnvqklkdtvk  120
Chimpanzee (XP_003313906)   qvlnftleevlfpqsdrfqpymqevvpflarlsnrlstchiegddlhiqrnvqklkdtvk
Orangutan (XP_002823544)    qvlnftleevlfpqsdrfqpymqevvpflarlsnrlstchiegddlhiqrnvqklkdtvk
Mouse (Q9JJY9)              qvlnftledvllpqsdrfqpymqevvpfltklsnqlsschisgddqniqknvrrlketvk
Dog (XP_538274)             evlnftleevllpqsdrfqpymqevvpflarlsnklsqchienddghiqrnvqklkdtvq
                             ******* ** ****************  *** ** ***  **  ** **  ** **

Human (Q9GZX6)              klgesgeikaigeldllfmslrnaci  146  (SEQ ID NO:4)
Chimpanzee (XP_003313906)   klgengeikaigeldllfmslrnaci       (SEQ ID NO:48)
Orangutan (XP_002823544)    klgesgeikaigeldllfmslrnaci       (SEQ ID NO:49)
Mouse (Q9JJY9)              klgesgeikaigeldllfmslrnacv       (SEQ ID NO:50)
Dog (XP_538274)             klgengeikaigeldllfmalrnacv       (SEQ ID NO:51)
                            **** ************** *****
```

FIG. 1

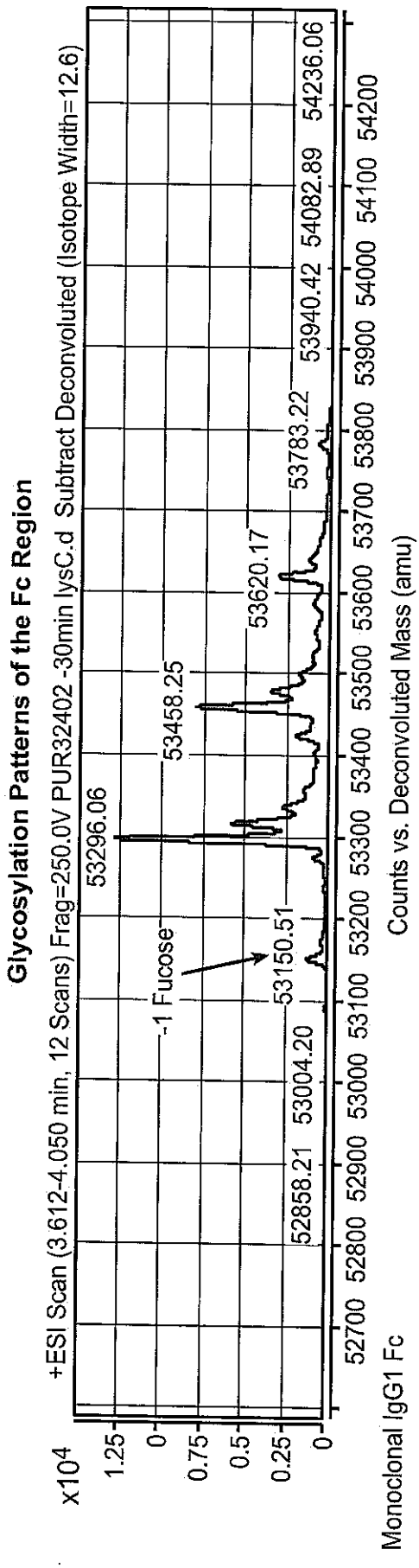

Glycosylation Patterns of the Fc Region
+ESI Scan (3.612-4.050 min, 12 Scans) Frag=250.0V PUR32402 -30min lysC.d Subtract Deconvoluted (Isotope Width=12.6)
x10^4
1.25
0
0.75
0.5
0.25
0
-1 Fucose
53296.06
53458.25
53620.17
53150.51
53783.22
53940.42
54082.89
54236.06
52858.21
53004.20
52700 52800 52900 53000 53100 53200 53300 53400 53500 53600 53700 53800 53900 54000 54100 54200
Monoclonal IgG1 Fc
Counts vs. Deconvoluted Mass (amu)

FIG. 2A

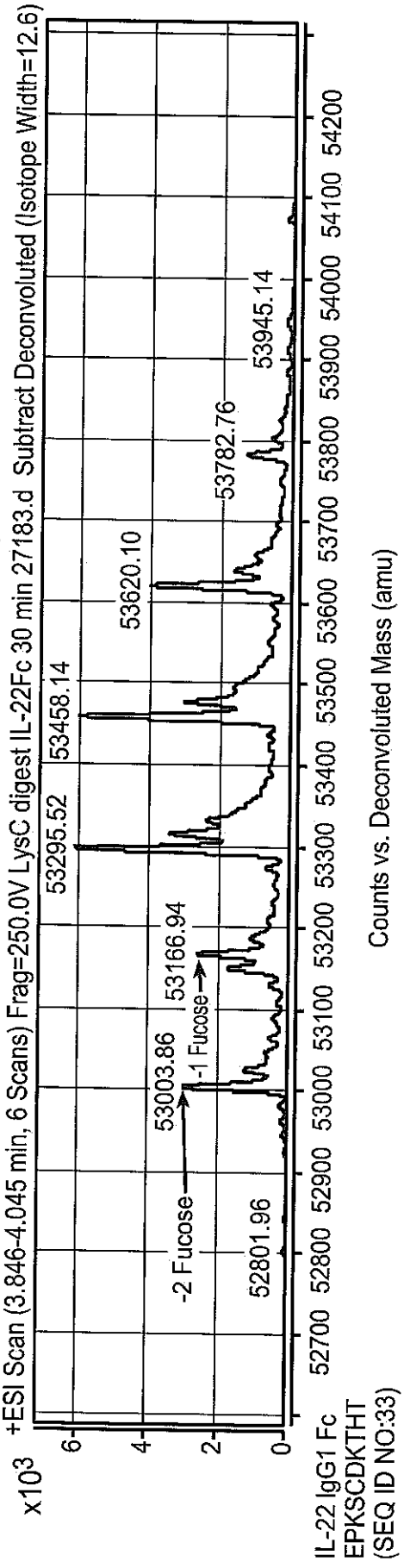

Glycosylation Patterns of the Fc Region
+ESI Scan (3.846-4.045 min, 6 Scans) Frag=250.0V LysC digest IL-22Fc 30 min 27183.d Subtract Deconvoluted (Isotope Width=12.6)
x10^3
6
4
2
0
53295.52
53458.14
53620.10
53782.76
53945.14
-2 Fucose
53003.86
-1 Fucose
53166.94
52801.96
52700 52800 52900 53000 53100 53200 53300 53400 53500 53600 53700 53800 53900 54000 54100 54200
IL-22 IgG1 Fc
EPKSCDKTHT
(SEQ ID NO:33)
Counts vs. Deconvoluted Mass (amu)

FIG. 2B

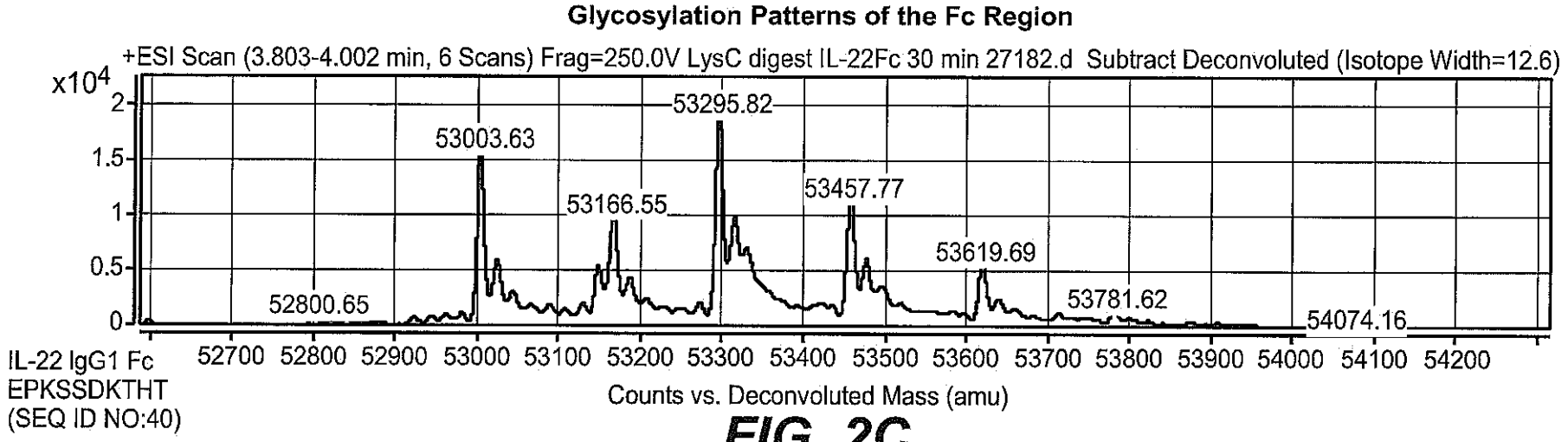

Glycosylation Patterns of the Fc Region
+ESI Scan (3.803-4.002 min, 6 Scans) Frag=250.0V LysC digest IL-22Fc 30 min 27182.d Subtract Deconvoluted (Isotope Width=12.6)
x10^4
2
1.5
1
0.5
0
53295.82
53003.63
53457.77
53166.55
53619.69
52800.65
53781.62
54074.16
52700 52800 52900 53000 53100 53200 53300 53400 53500 53600 53700 53800 53900 54000 54100 54200
Counts vs. Deconvoluted Mass (amu)
IL-22 IgG1 Fc
EPKSSDKTHT
(SEQ ID NO:40)

FIG. 2C

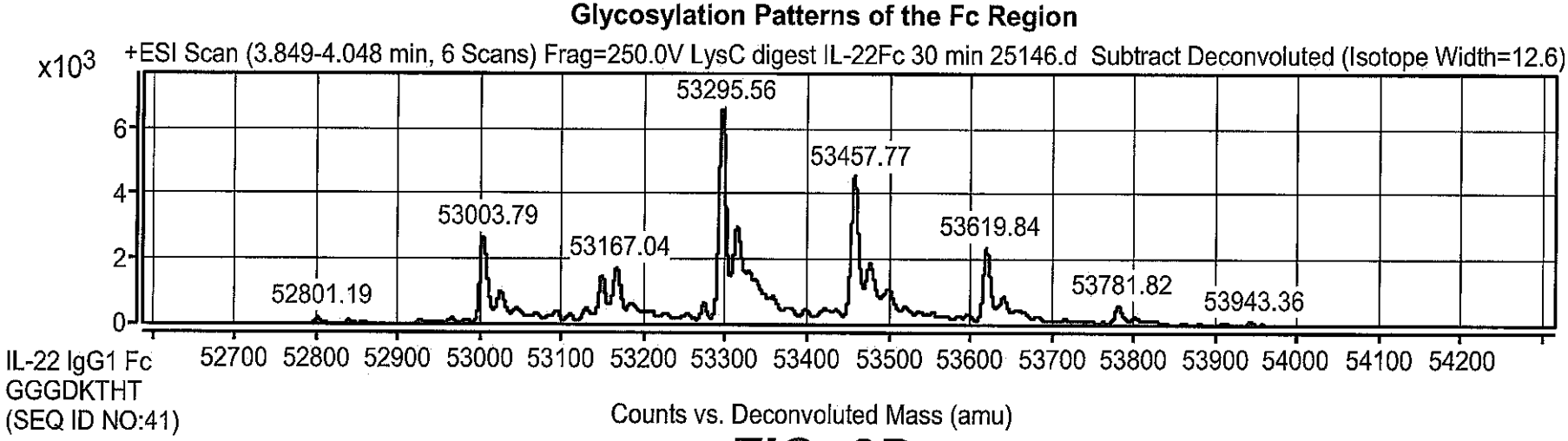
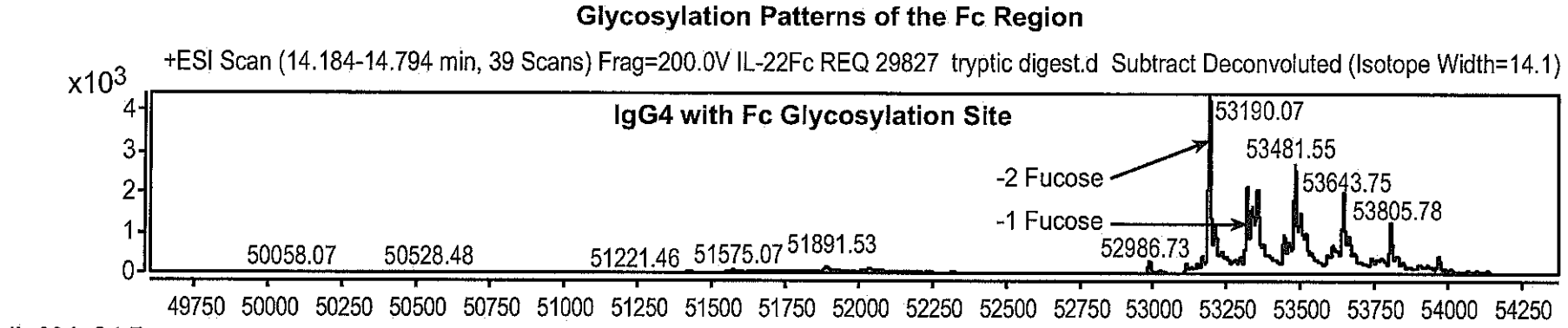
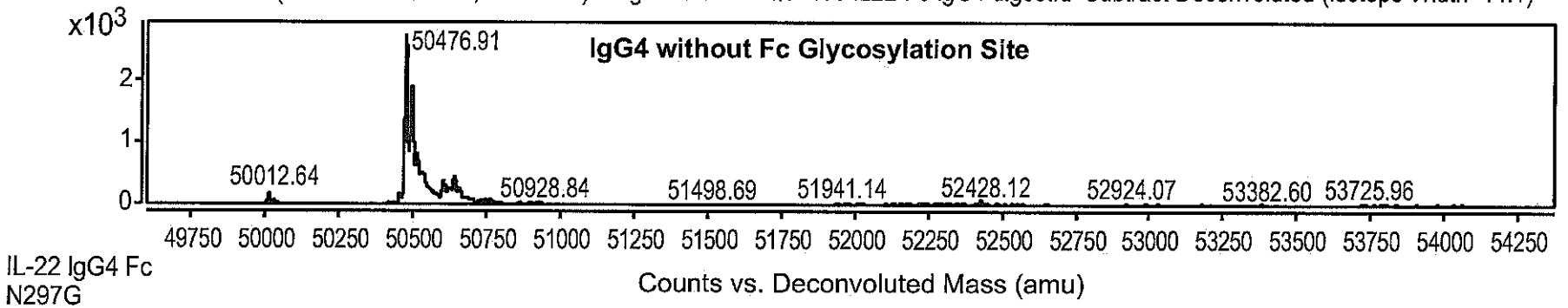

Glycosylation Patterns of the Fc Region
+ESI Scan (3.849-4.048 min, 6 Scans) Frag=250.0V LysC digest IL-22Fc 30 min 25146.d Subtract Deconvoluted (Isotope Width=12.6)
x10^3
6
4
2
0
53295.56
53457.77
53003.79
53619.84
53167.04
53781.82
52801.19
53943.36
52700 52800 52900 53000 53100 53200 53300 53400 53500 53600 53700 53800 53900 54000 54100 54200
Counts vs. Deconvoluted Mass (amu)
IL-22 IgG1 Fc
GGGDKTHT
(SEQ ID NO:41)

FIG. 2D



IL-22 IgG4 Fc
RVESKYGPP
(SEQ ID NO:44)

FIG. 2E



IL-22 IgG4 Fc
N297G
RVESKYGPP
(SEQ ID NO:44)

FIG. 2F

Glycosylation Patterns of the Fc Region
+ESI Scan (3.178-3.566 min, 25 Scans) Frag=250.0V PUR37291 IL-22 Fc lys C digest.d Subtract Deconvoluted (Isotope Width=14.1)
IgG1 without Fc Glycosylation Site
50327.76
50751.91
51137.06
51516.68
52104.05
52696.77
53180.03
53645.23
54222.26
x10^3
Counts vs. Deconvoluted Mass (amu)
IL-22 IgG1 Fc
N297G
EPKSSDKTHT
(SEQ ID NO:40)

FIG. 2G

FIG. 3

[Mature N-term IL-22

IL-22 IgG4 Fc APISSHCRLDKSNFQQPYITNRTFMLAKEASLADNNTDVRLIGEKLFHGV 50
IL-22 IgG1 Fc APISSHCRLDKSNFQQPYITNRTFMLAKEASLADNNTDVRLIGEKLFHGV 50
IL-22 APISSHCRLDKSNFQQPYITNRTFMLAKEASLADNNTDVRLIGEKLFHGV 50

IL-22 IgG4 Fc SMSERCYLMKQVLNFTLEEVLFPQSDRFQPYMQEVVPFLARLSNRLSTCH 100
IL-22 IgG1 Fc SMSERCYLMKQVLNFTLEEVLFPQSDRFQPYMQEVVPFLARLSNRLSTCH 100
IL-22 SMSERCYLMKQVLNFTLEEVLFPQSDRFQPYMQEVVPFLARLSNRLSTCH 100

C-term] [Linker

IL-22 IgG4 Fc IEGDDLHIQRNVQKLKDTVKKLGESGEIKAIGELDLLFMSLRNACIRVES 150
IL-22 IgG1 Fc IEGDDLHIQRNVQKLKDTVKKLGESGEIKAIGELDLLFMSLRNACIEPKS 150
IL-22 IEGDDLHIQRNVQKLKDTVKKLGESGEIKAIGELDLLFMSLRNACI (SEQ ID NO:4) 146

]Fc

IL-22 IgG4 Fc K-YGPPCPPCPAPEFLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSQE 199
IL-22 IgG1 Fc SDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHE 200

N297G

IL-22 IgG4 Fc DPEVQFNWYVDGVEVHNAKTKPREEQFGSTYRVVSVLTVLHQDWLNGKEY 249
IL-22 IgG1 Fc DPEVKFNWYVDGVEVHNAKTKPREEQYGSTYRVVSVLTVLHQDWLNGKEY 250

IL-22 IgG4 Fc KCKVSNKGLPSSIEKTISKAKGQPREPQVYTLPPSQEEMTKNQVSLTCLV 299
IL-22 IgG1 Fc KCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLV 300

IL-22 IgG4 Fc KGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSRLTVDKSRWQE 349
IL-22 IgG1 Fc KGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ 350

]

IL-22 IgG4 Fc GNVFSCSVMHEALHNHYTQKSLSLSLGK (SEQ ID NO:16/SEQ ID NO:8) 377
IL-22 IgG1 Fc GNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ ID NO:20/SEQ ID NO:12) 378

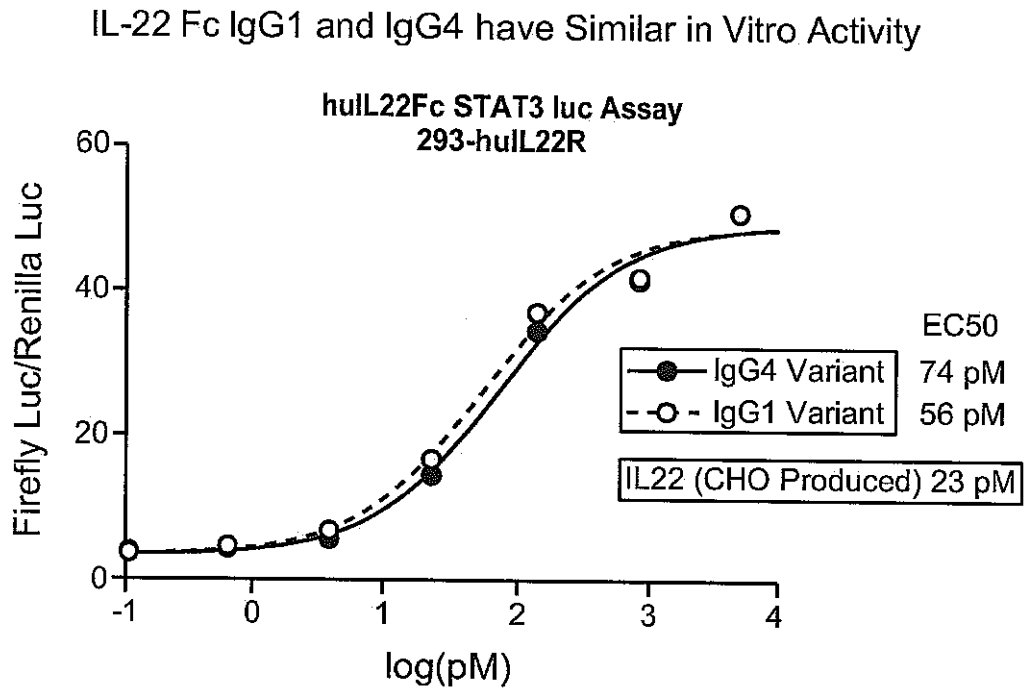

IL-22 Fc IgG1 and IgG4 have Similar in Vitro Activity
huIL22Fc STAT3 luc Assay
293-huIL22R
Firefly Luc/Renilla Luc
60
40
20
0
-1
0
1
2
3
4
log(pM)
EC50
IgG4 Variant 74 pM
IgG1 Variant 56 pM
IL22 (CHO Produced) 23 pM

FIG. 4

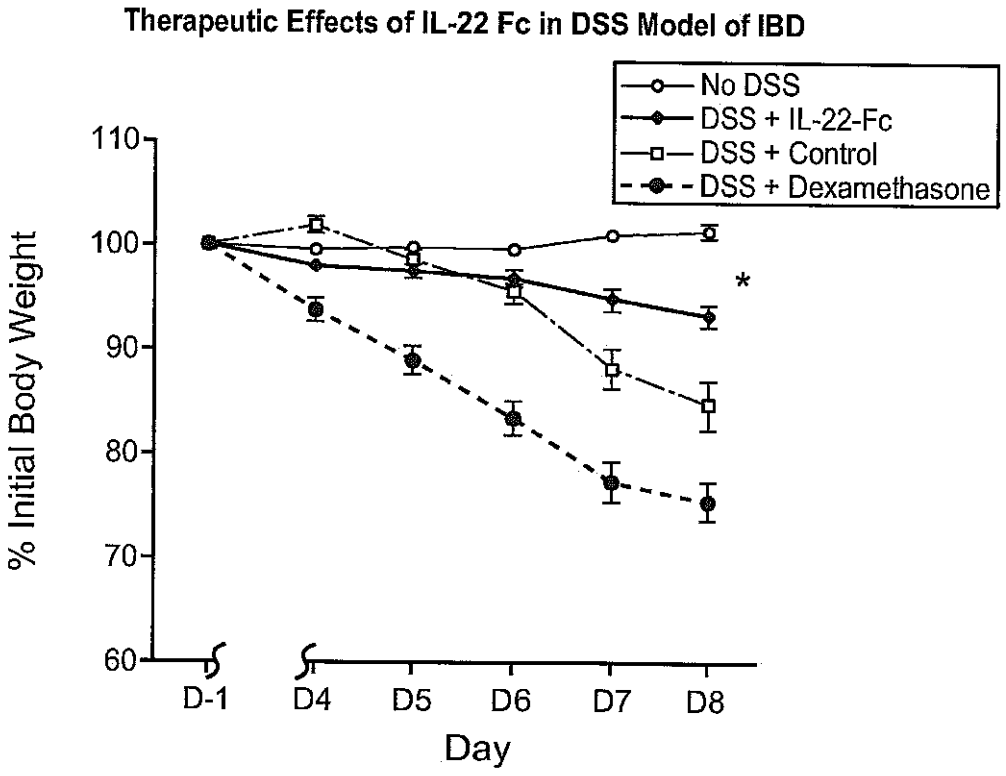

Therapeutic Effects of IL-22 Fc in DSS Model of IBD
No DSS
DSS + IL-22-Fc
DSS + Control
DSS + Dexamethasone
% Initial Body Weight
110
100
90
80
70
60
*
D-1
D4
D5
D6
D7
D8
Day

FIG. 5A

FIG. 5B

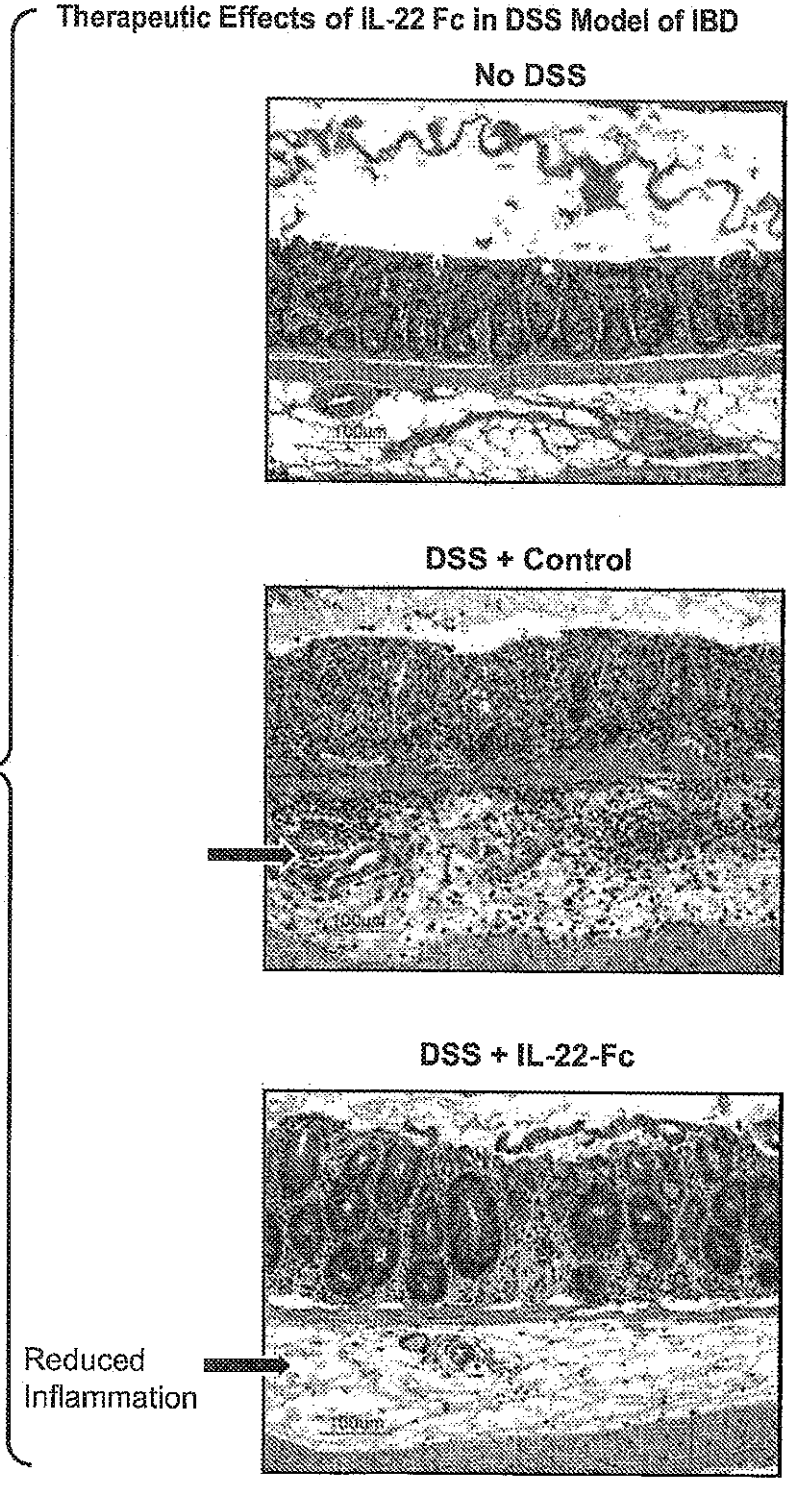
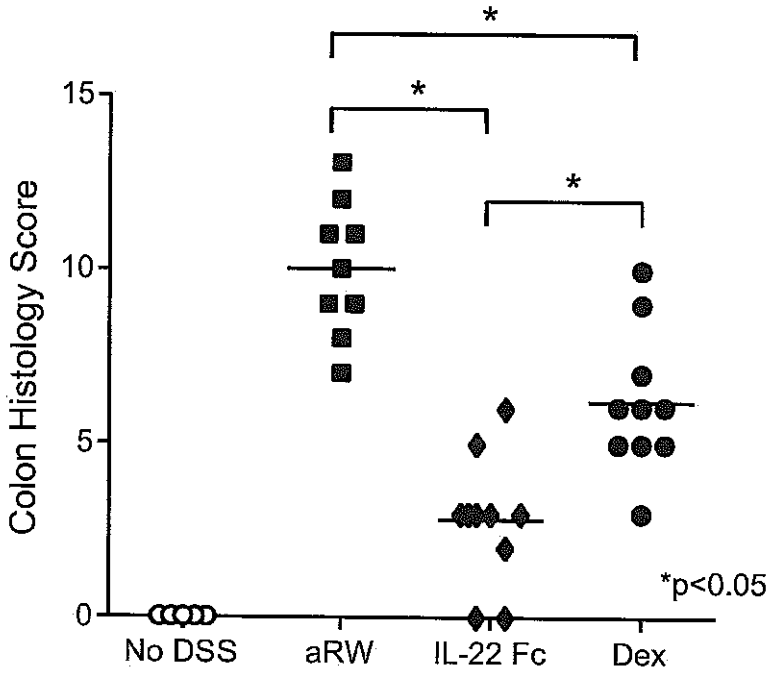

Therapeutic Effects of IL-22 Fc in DSS Model of IBD
No DSS
DSS + Control
DSS + IL-22-Fc
Reduced Inflammation

FIG. 5C


Therapeutic Effects of IL-22 Fc in DSS Model of IBD
Colon Histology Score
15
10
5
0
*
*
*
*p<0.05
No DSS
aRW
IL-22 Fc
Dex

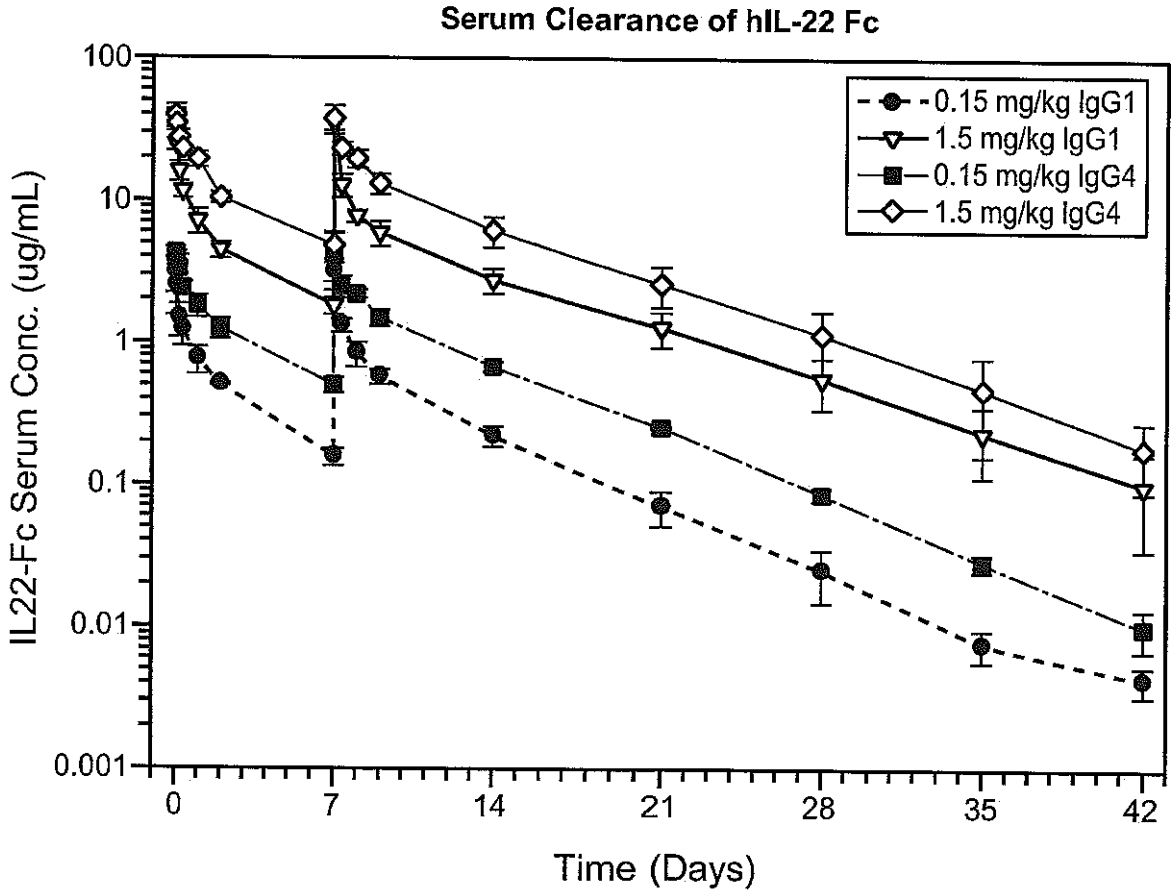
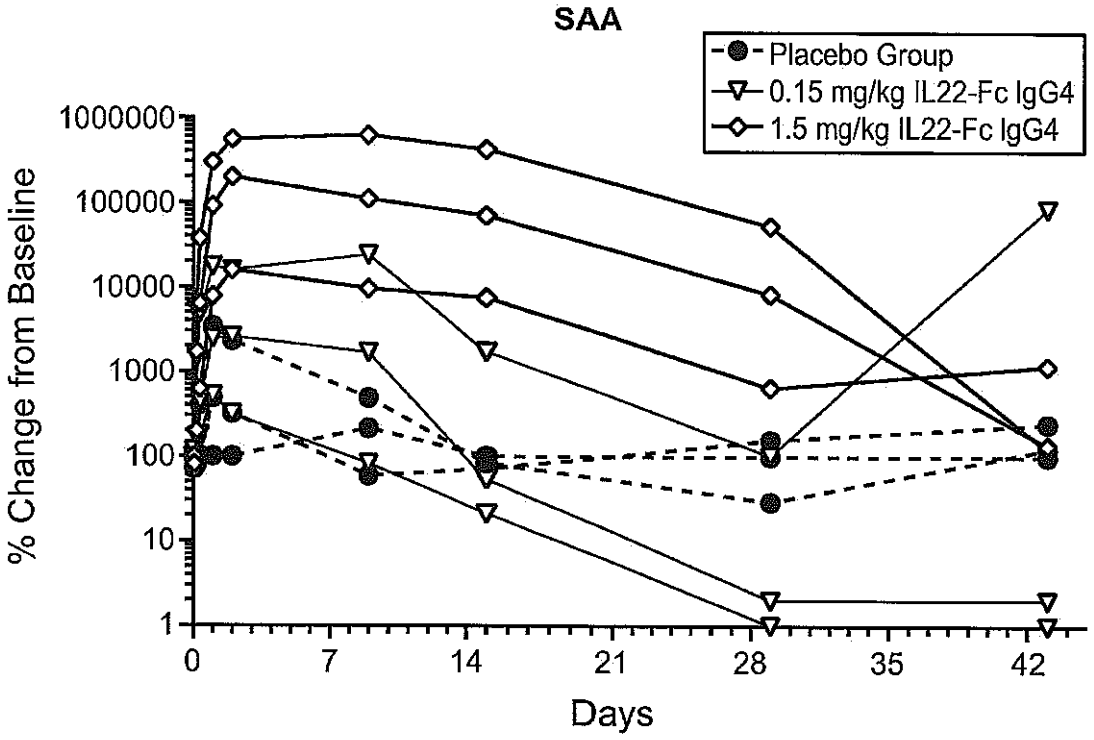

Serum Clearance of hIL-22 Fc
IL22-Fc Serum Conc. (ug/mL)
100
10
1
0.1
0.01
0.001
0.15 mg/kg IgG1
1.5 mg/kg IgG1
0.15 mg/kg IgG4
1.5 mg/kg IgG4
0
7
14
21
28
35
42
Time (Days)

FIG. 6


SAA
Placebo Group
0.15 mg/kg IL22-Fc IgG4
1.5 mg/kg IL22-Fc IgG4
% Change from Baseline
1000000
100000
10000
1000
100
10
1
0
7
14
21
28
35
42
Days

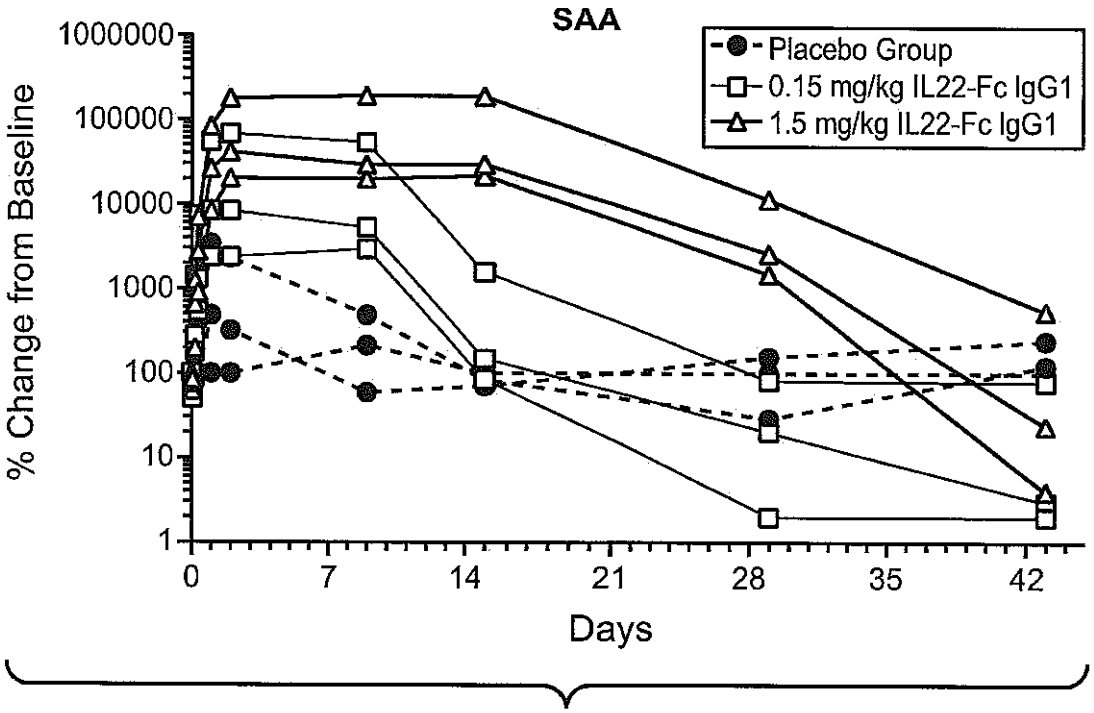
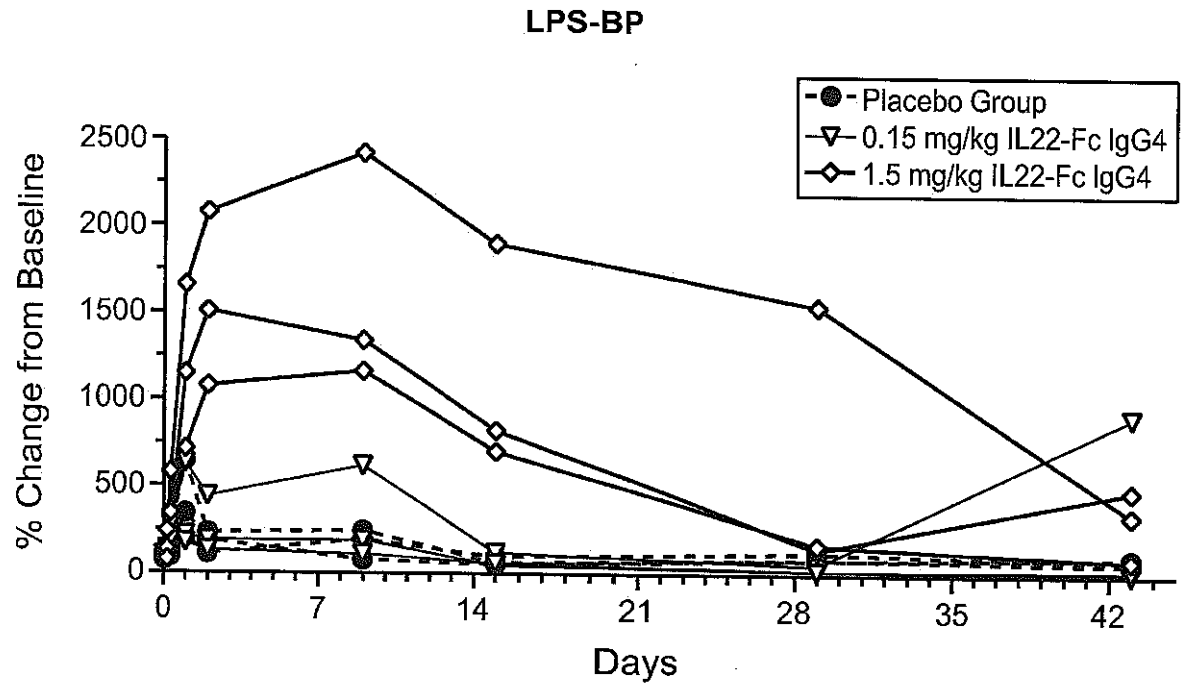

SAA
Placebo Group
0.15 mg/kg IL22-Fc IgG1
1.5 mg/kg IL22-Fc IgG1
% Change from Baseline
1000000
100000
10000
1000
100
10
1
0
7
14
21
28
35
42
Days

FIG. 7A


LPS-BP
Placebo Group
0.15 mg/kg IL22-Fc IgG4
1.5 mg/kg IL22-Fc IgG4
% Change from Baseline
2500
2000
1500
1000
500
0
0
7
14
21
28
35
42
Days

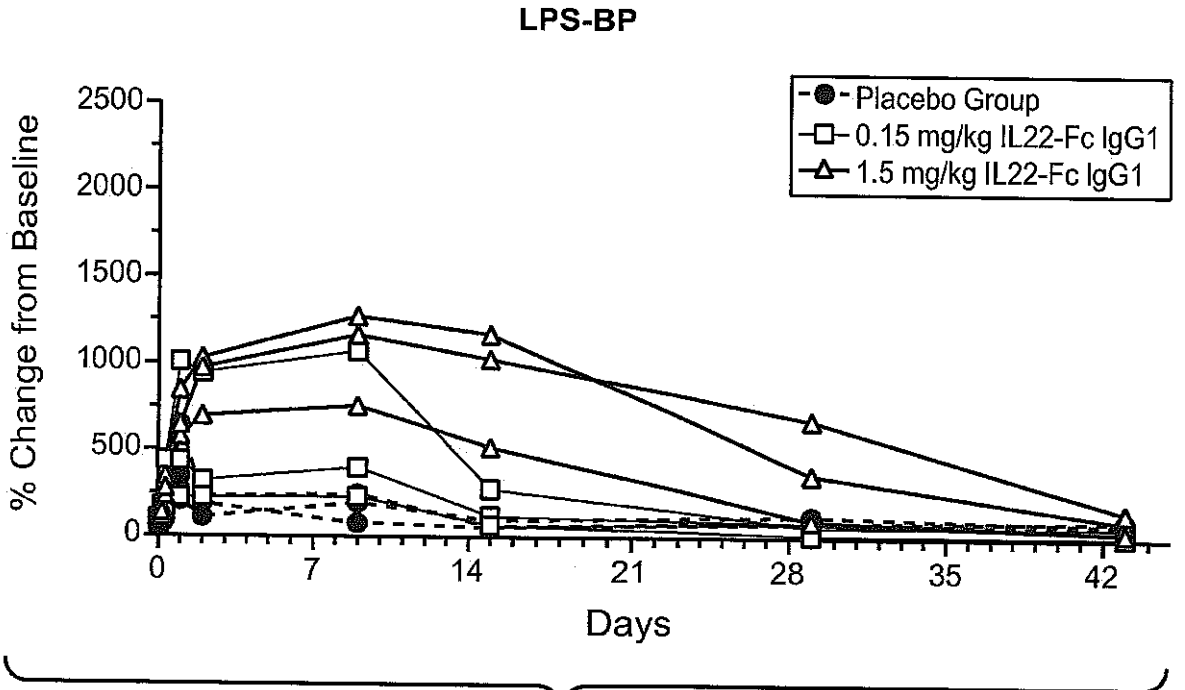
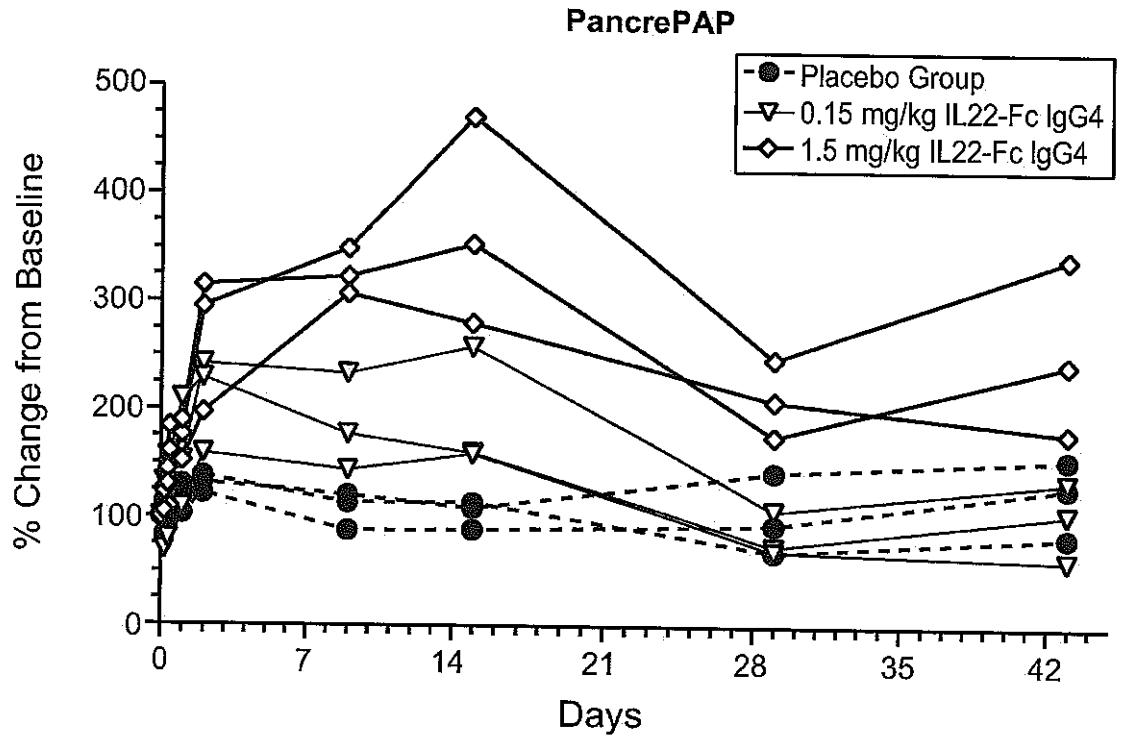

LPS-BP
Placebo Group
0.15 mg/kg IL22-Fc IgG1
1.5 mg/kg IL22-Fc IgG1
% Change from Baseline
2500
2000
1500
1000
500
0
0
7
14
21
28
35
42
Days

FIG. 7B


PancrePAP
Placebo Group
0.15 mg/kg IL22-Fc IgG4
1.5 mg/kg IL22-Fc IgG4
% Change from Baseline
500
400
300
200
100
0
0
7
14
21
28
35
42
Days

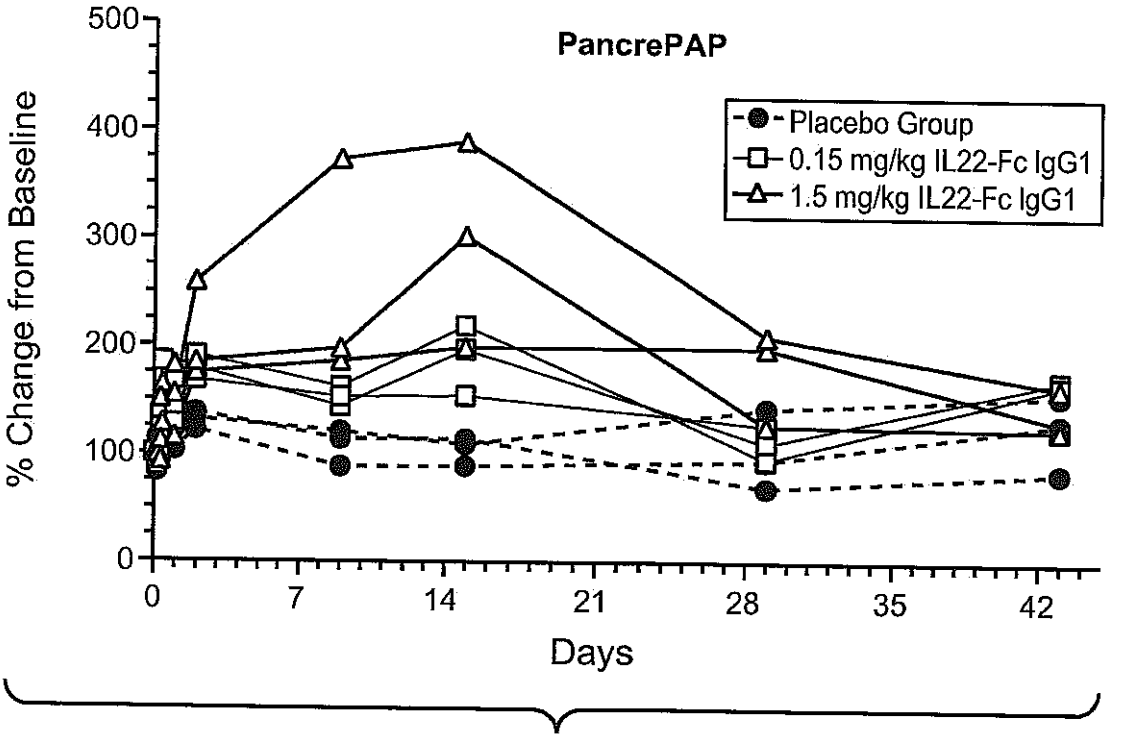

PancrePAP
Placebo Group
0.15 mg/kg IL22-Fc IgG1
1.5 mg/kg IL22-Fc IgG1
% Change from Baseline
500
400
300
200
100
0
0
7
14
21
28
35
42
Days

FIG. 7C

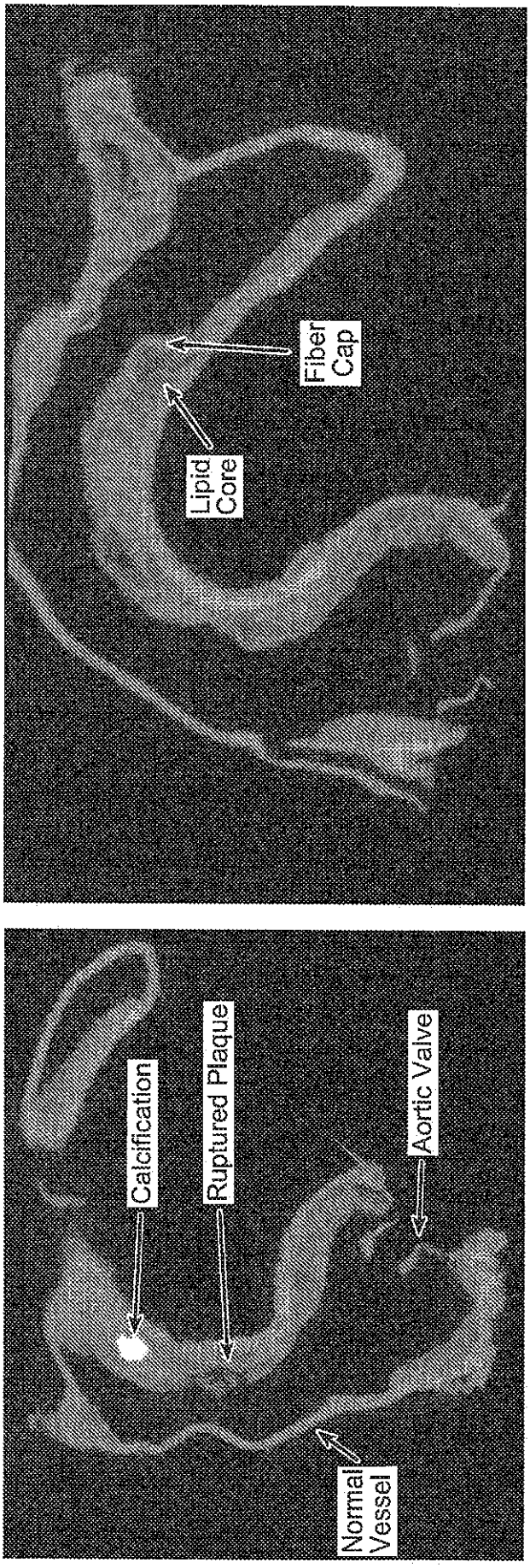

Fiber Cap
Lipid Core
Calcification
Ruptured Plaque
Aortic Valve
Normal Vessel

FIG. 8

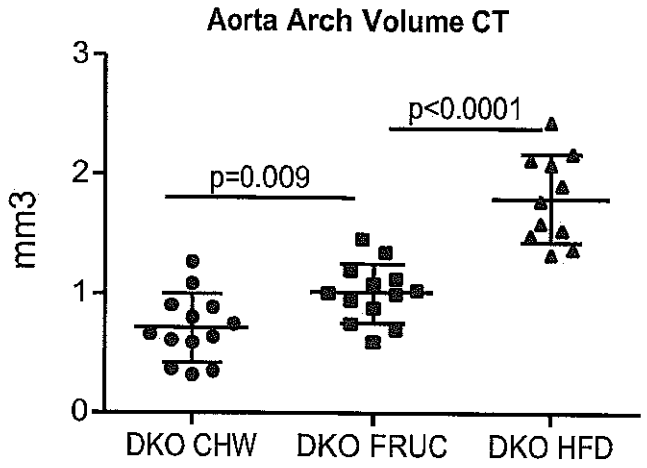

Aorta Arch Volume CT
3
2
1
0
mm3
p=0.009
p<0.0001
DKO CHW
DKO FRUC
DKO HFD

FIG. 9A

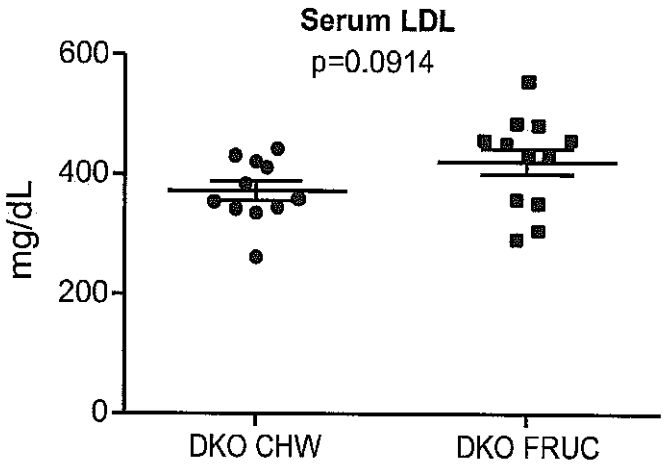

Serum LDL
p=0.0914
600
400
200
0
mg/dL
DKO CHW
DKO FRUC

FIG. 9B

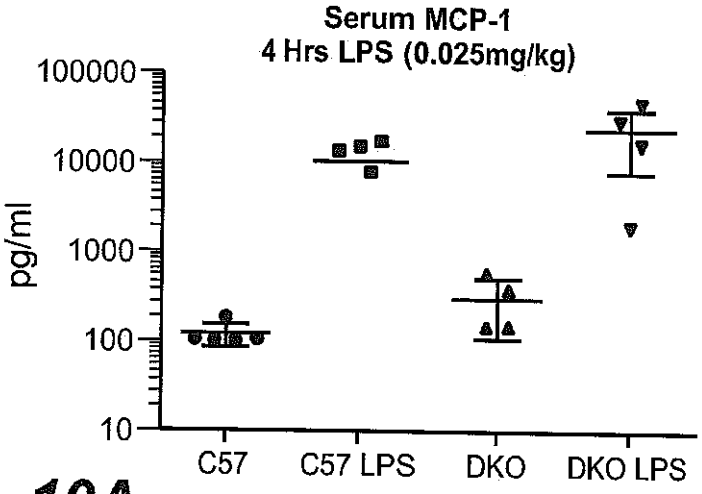


FIG. 10A

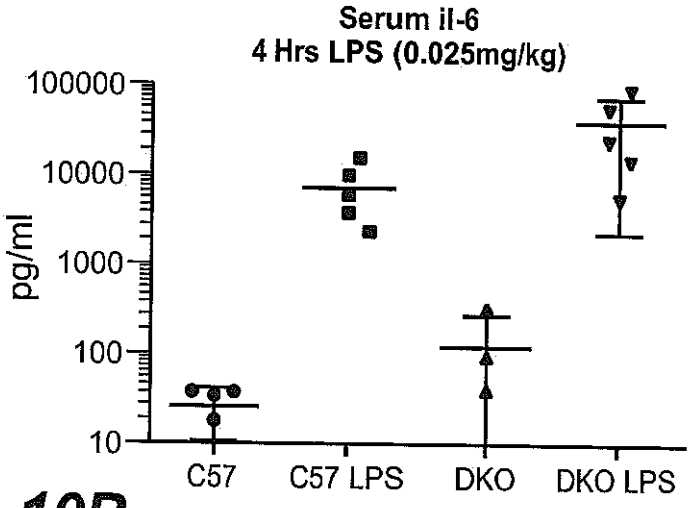


FIG. 10B

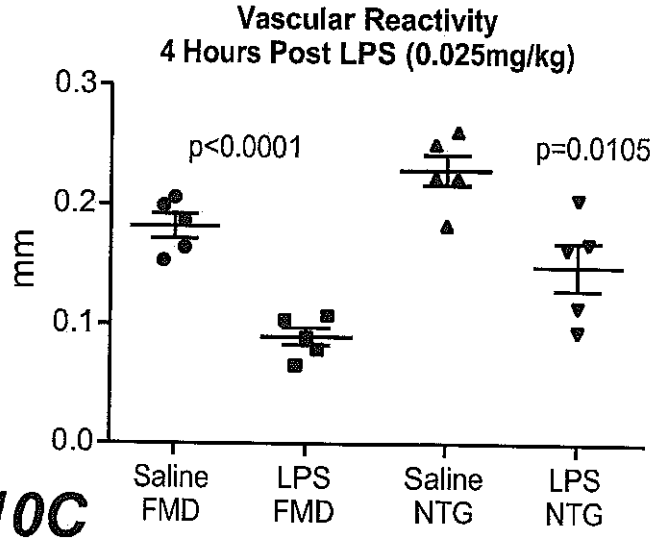


FIG. 10C

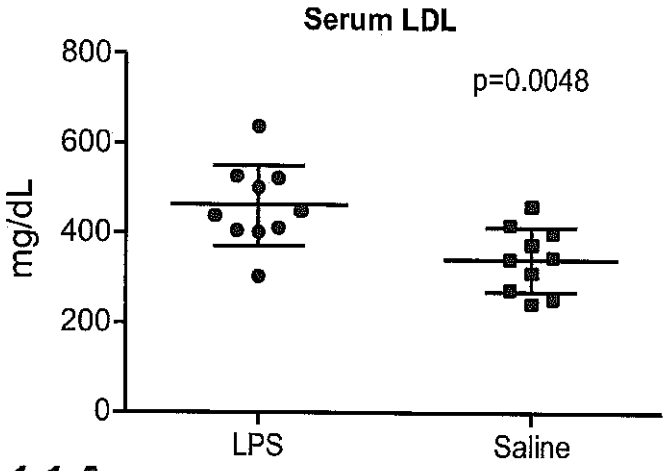


FIG. 11A

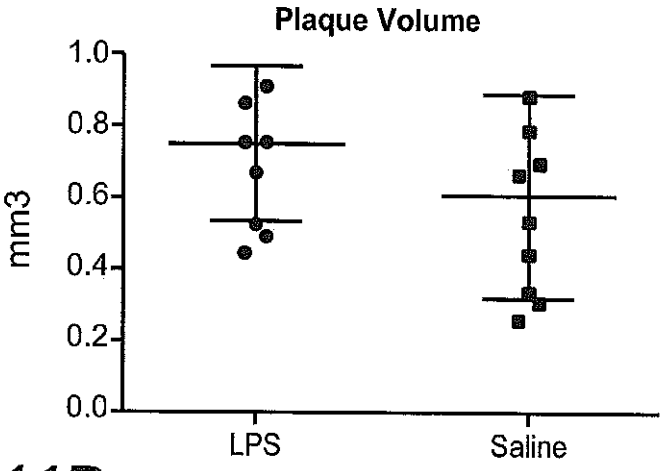


FIG. 11B

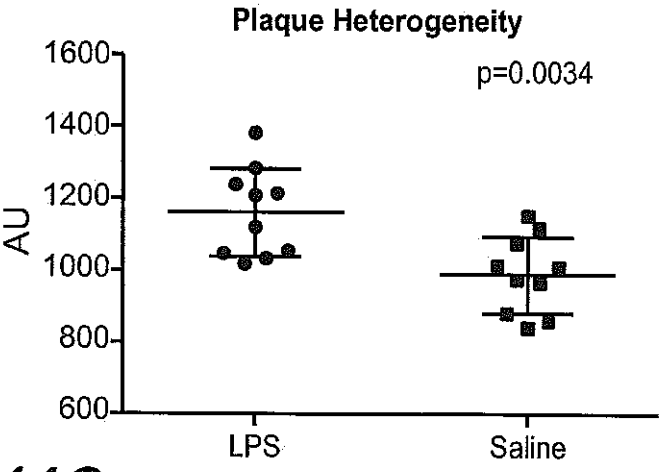


FIG. 11C

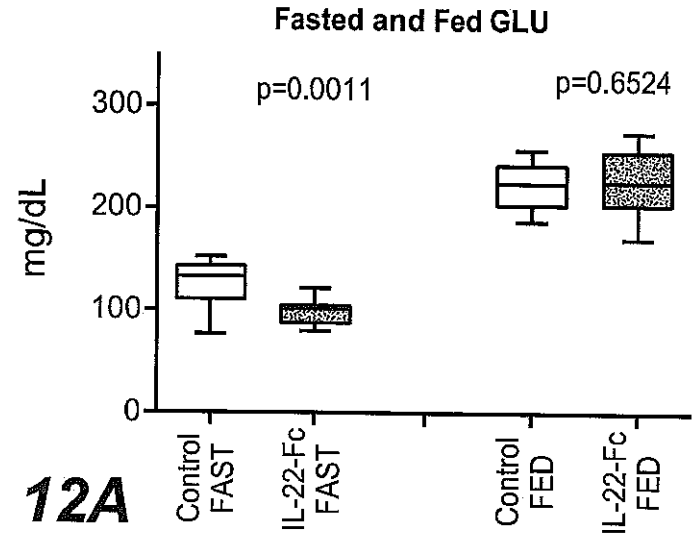


FIG. 12A

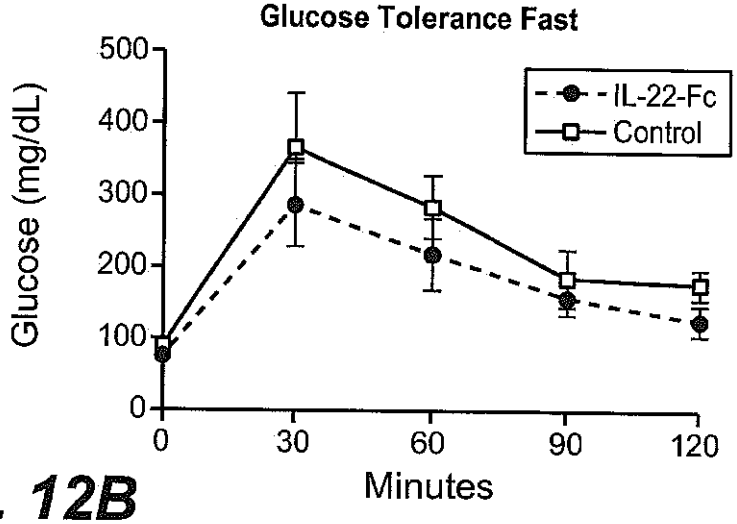


FIG. 12B

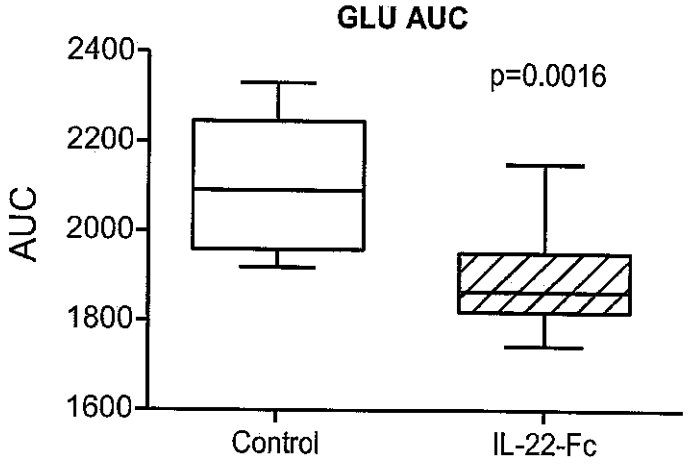


FIG. 12C

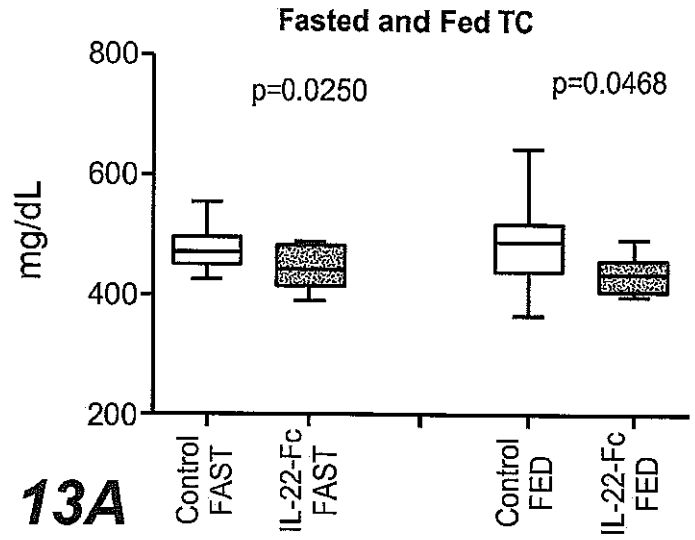


FIG. 13A

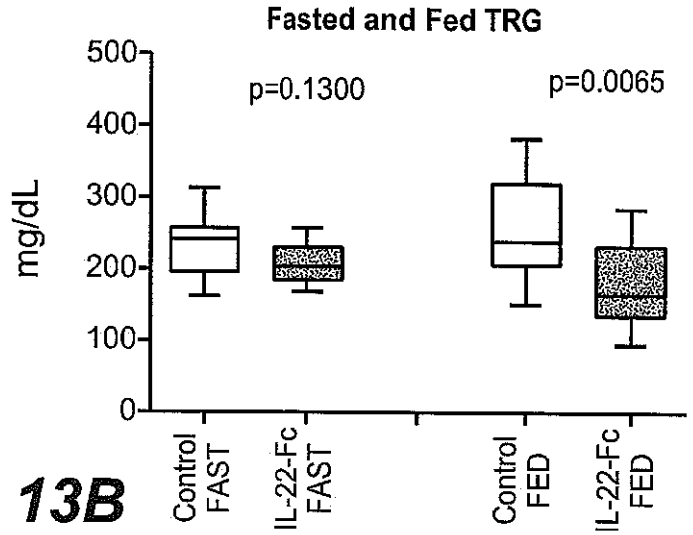


FIG. 13B

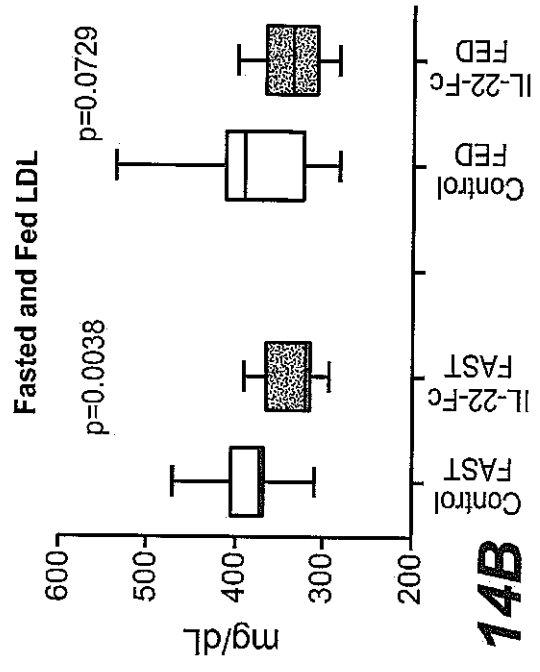


FIG. 14B

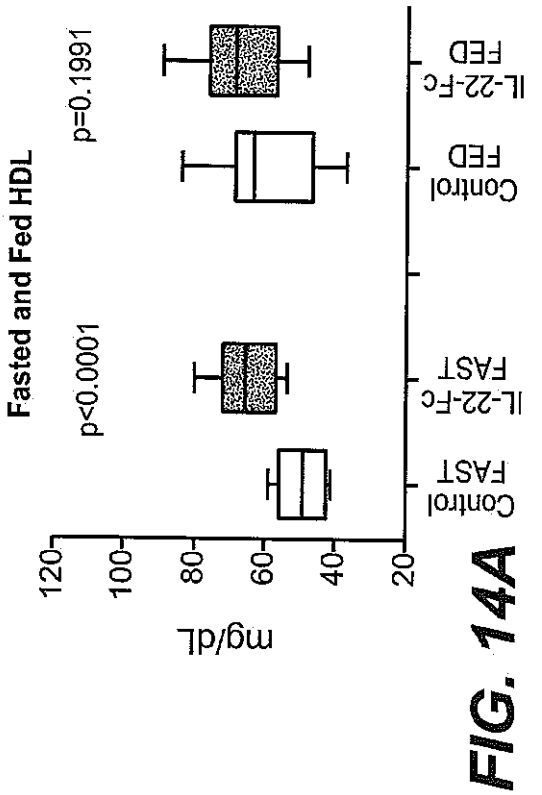


FIG. 14A

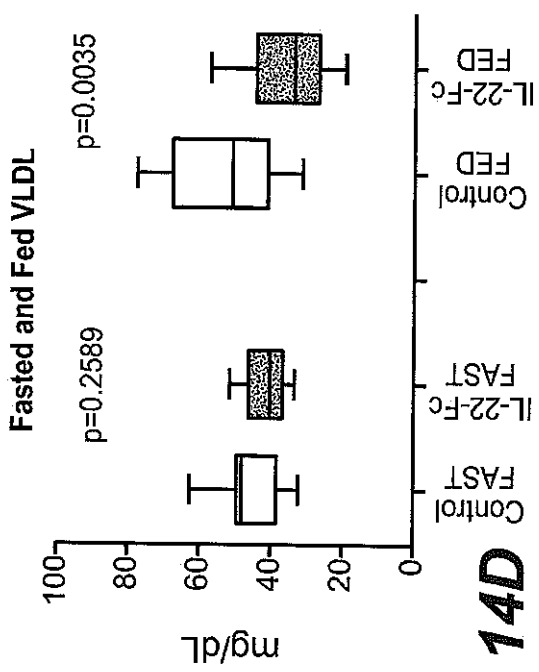


FIG. 14D

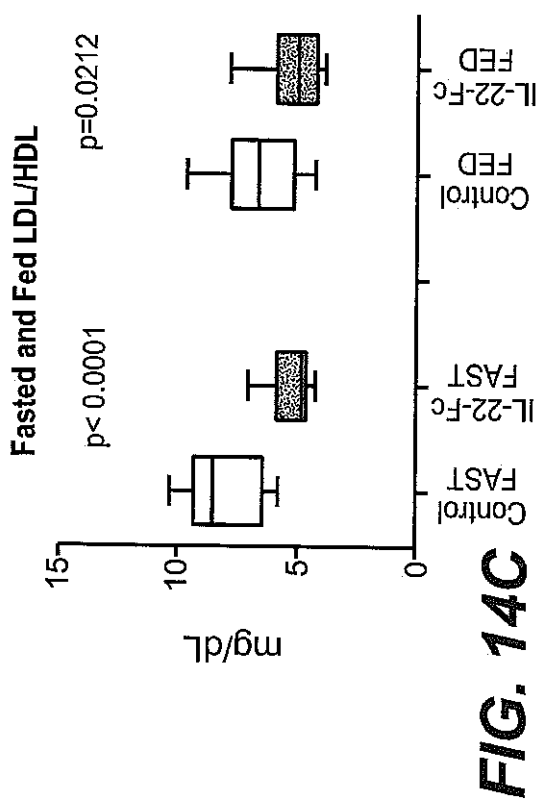


FIG. 14C

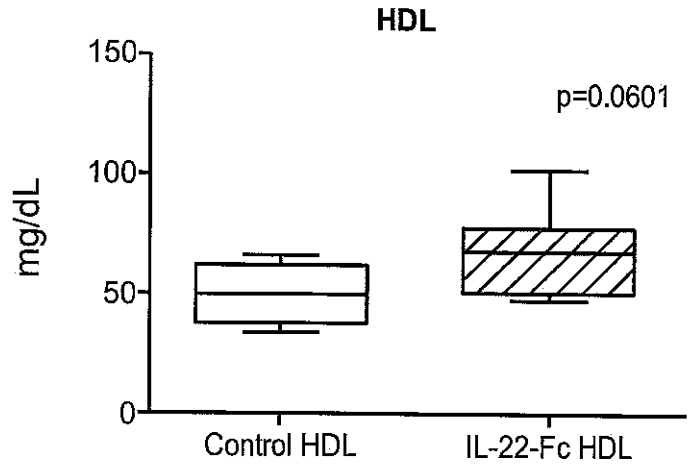


FIG. 14E 5 Days (Two Doses)

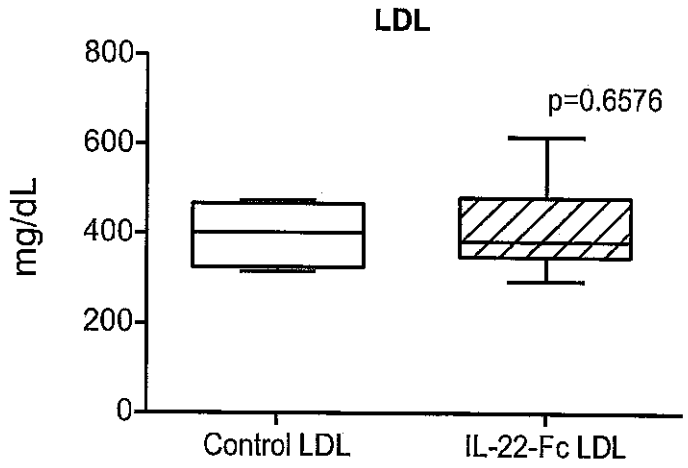


FIG. 14F 5 Days (Two Doses)

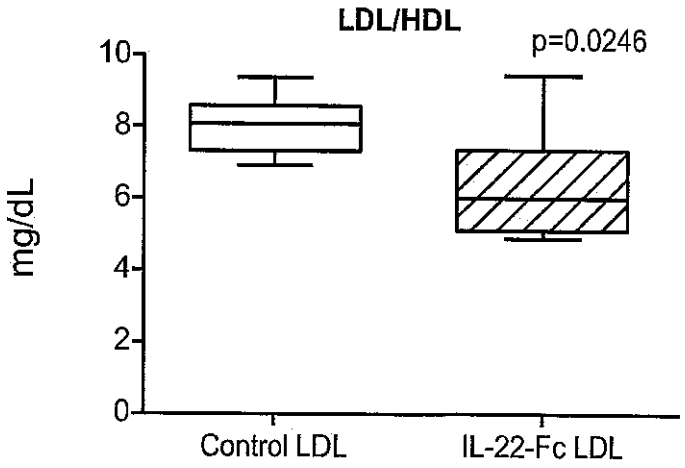


FIG. 14G 5 Days (Two Doses)

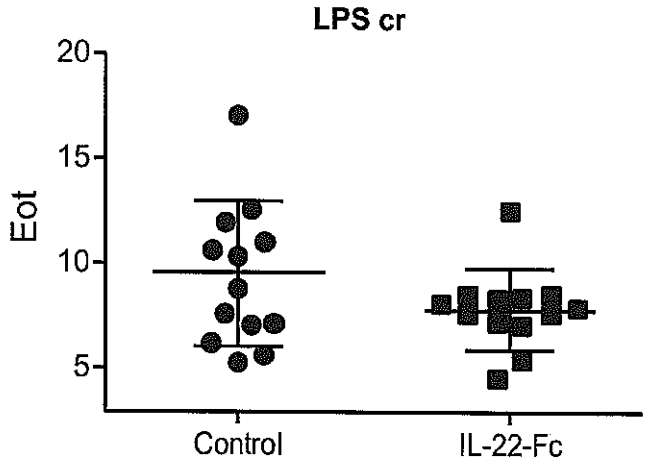

LPS cr
20
15
10
5
Eot
Control
IL-22-Fc

FIG. 15

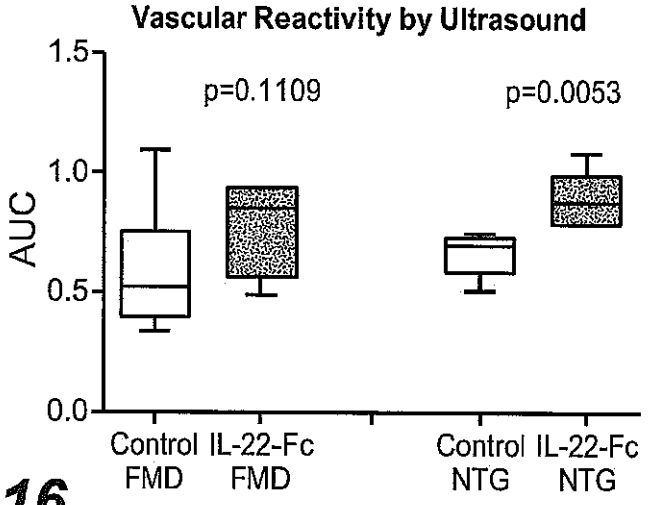

Vascular Reactivity by Ultrasound
1.5
1.0
0.5
0.0
AUC
p=0.1109
p=0.0053
Control FMD
IL-22-Fc FMD
Control NTG
IL-22-Fc NTG

FIG. 16

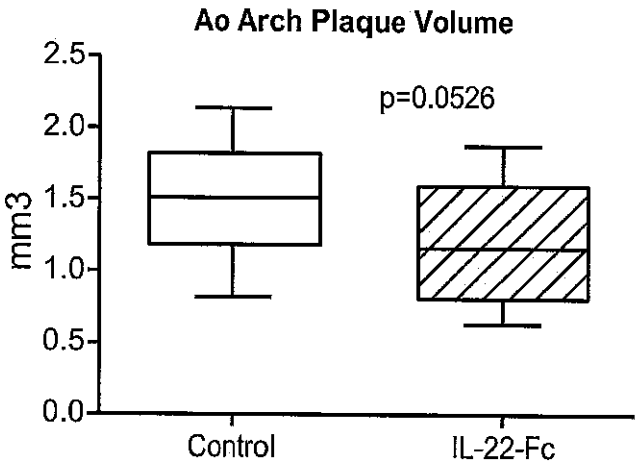


FIG. 17A

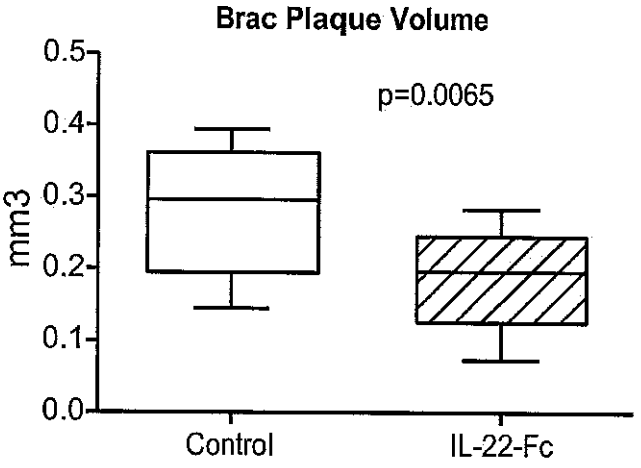


FIG. 17B

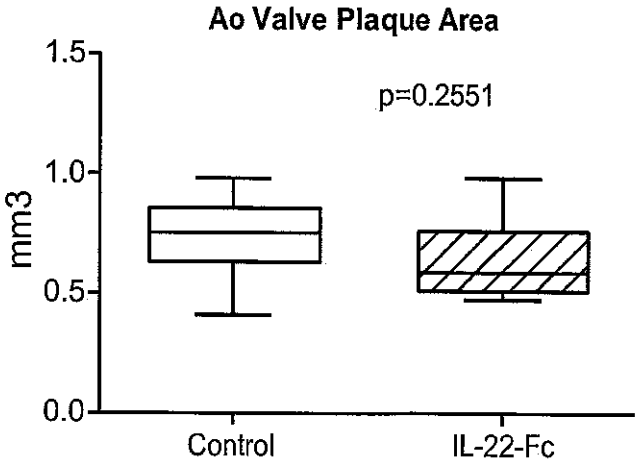


FIG. 17C

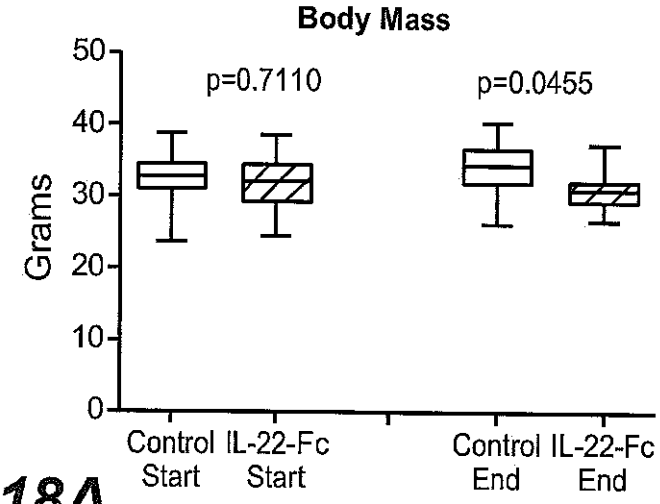


FIG. 18A

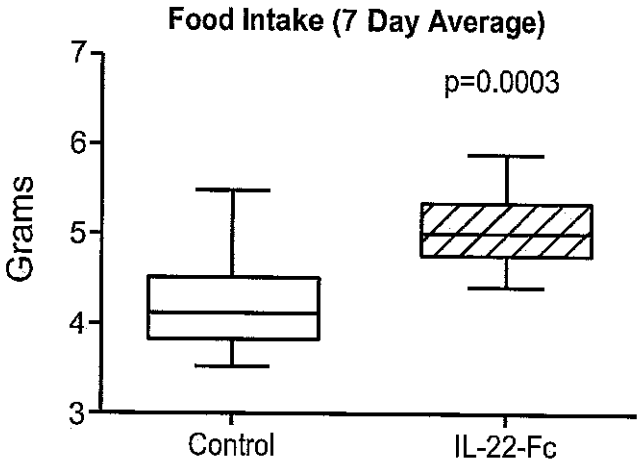


FIG. 18B

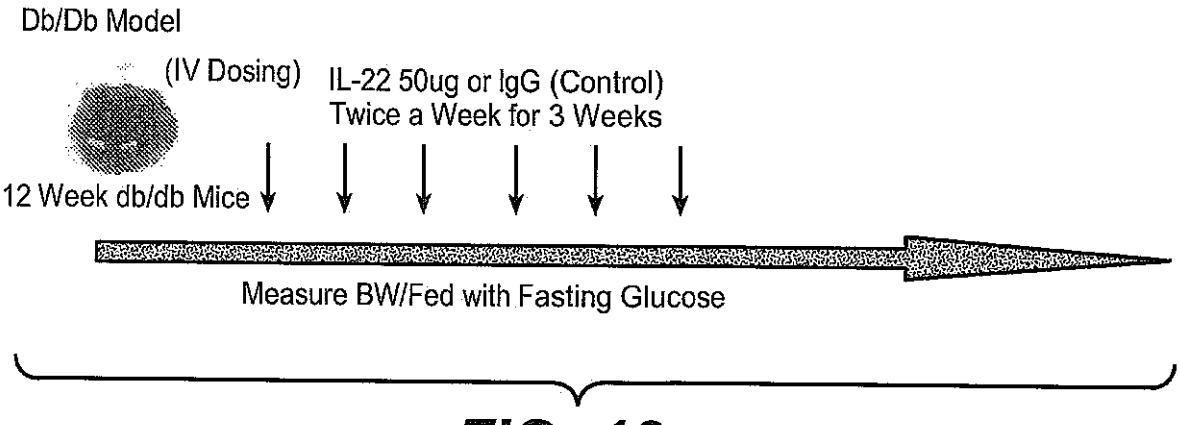


FIG. 19

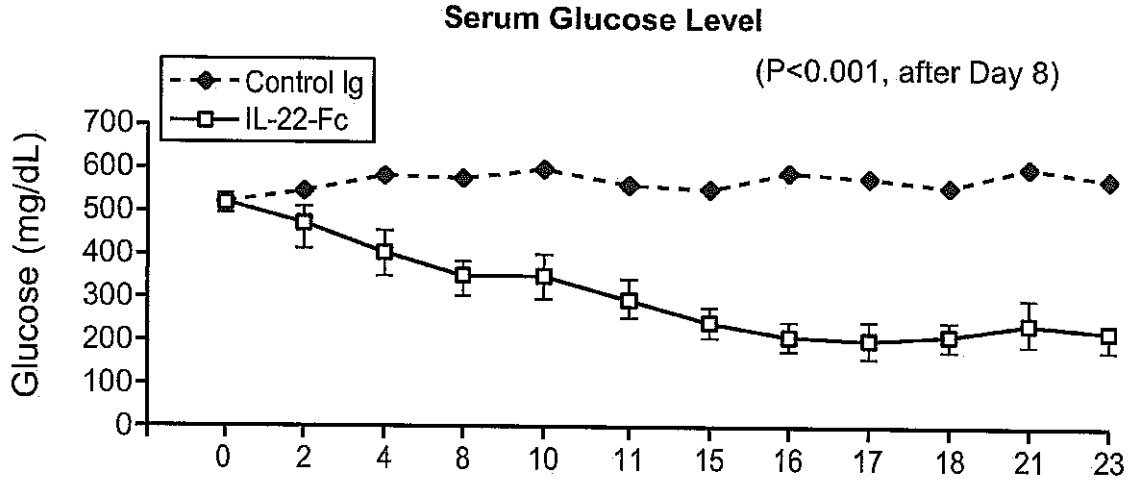


FIG. 20A

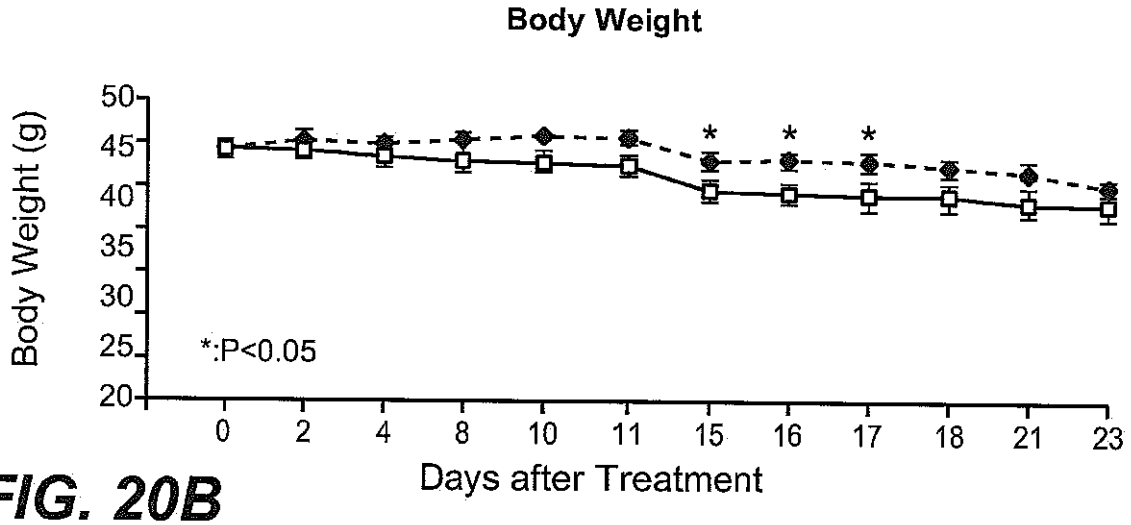


FIG. 20B

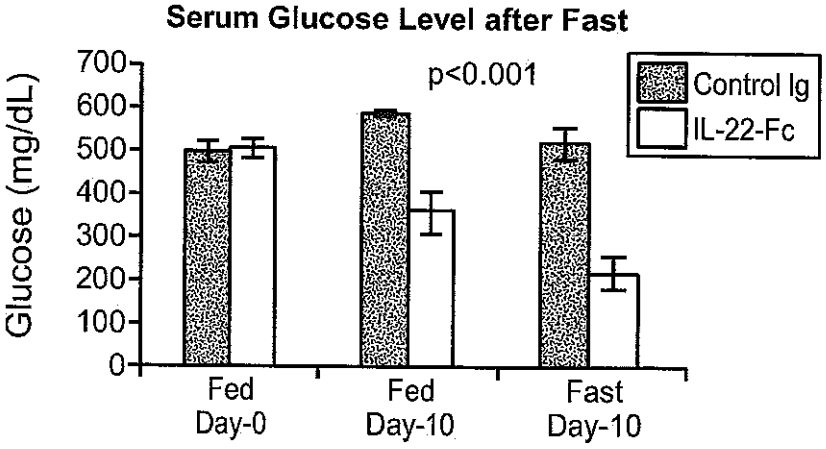


FIG. 20C

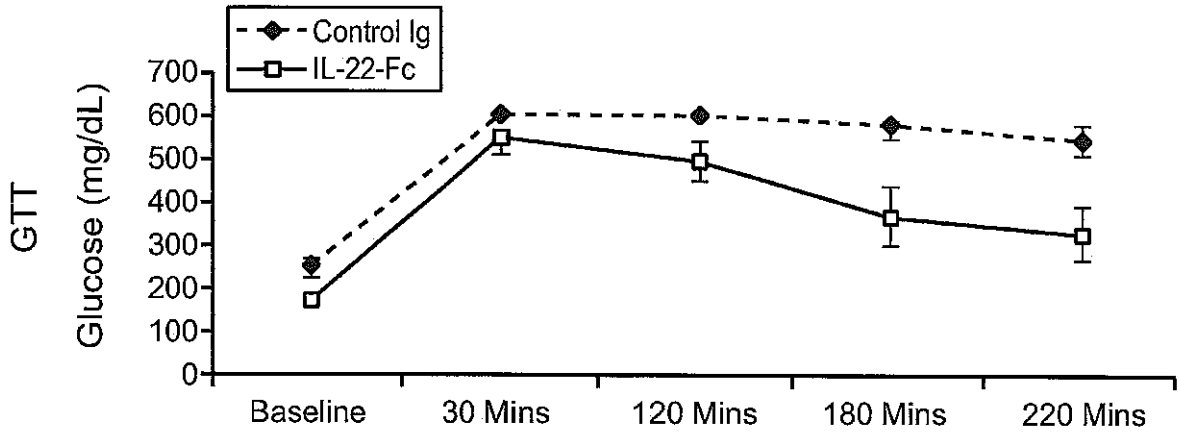


FIG. 21

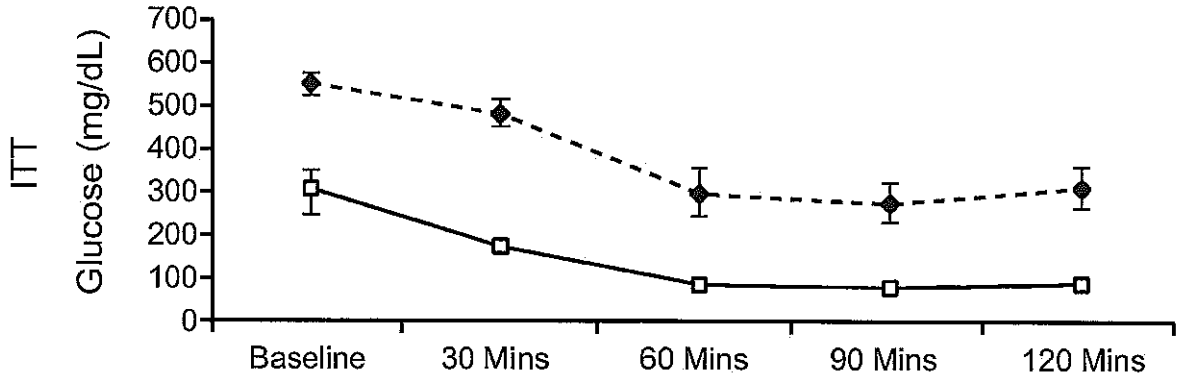


FIG. 22A

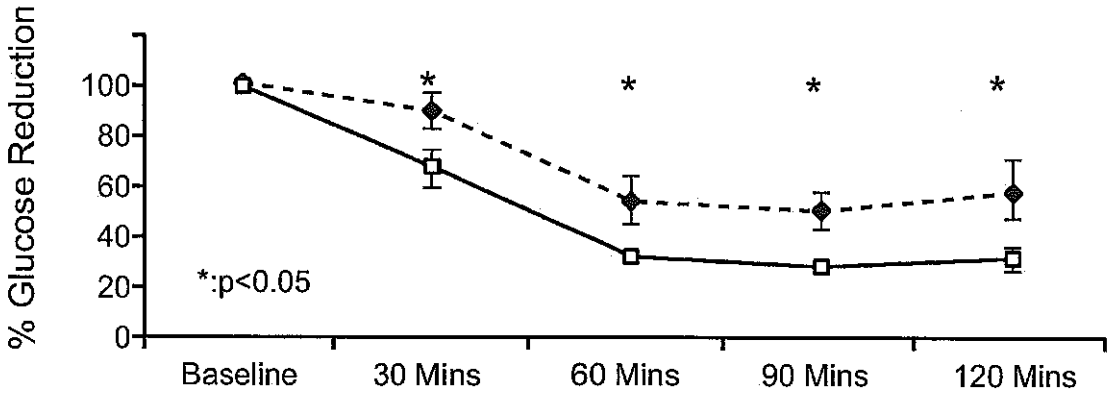


FIG. 22B

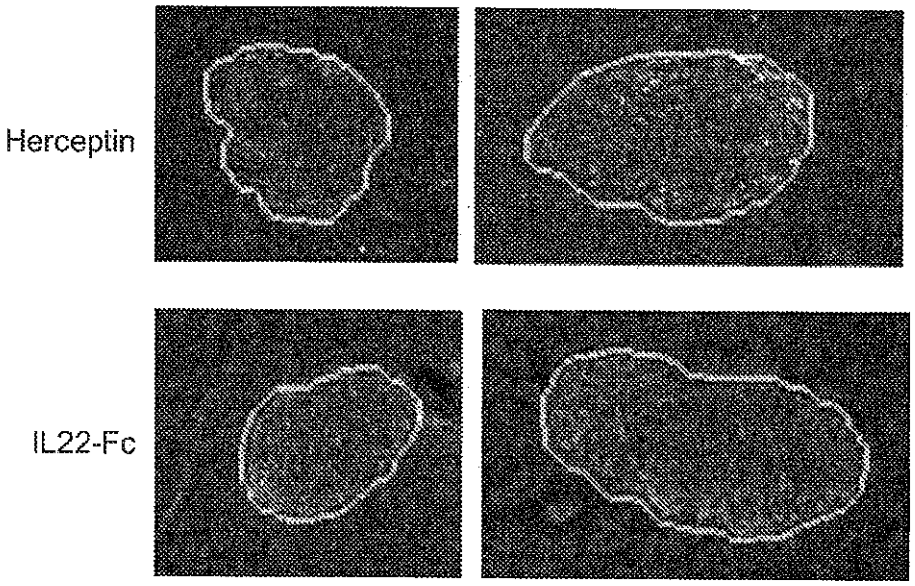


FIG. 23A

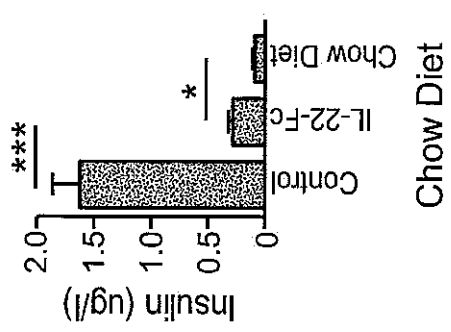


FIG. 23D

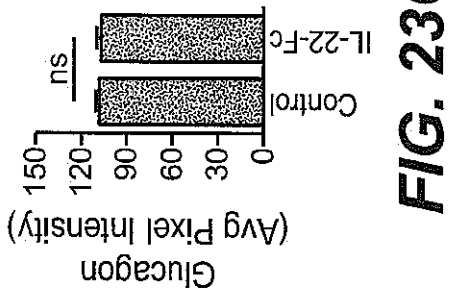


FIG. 23C

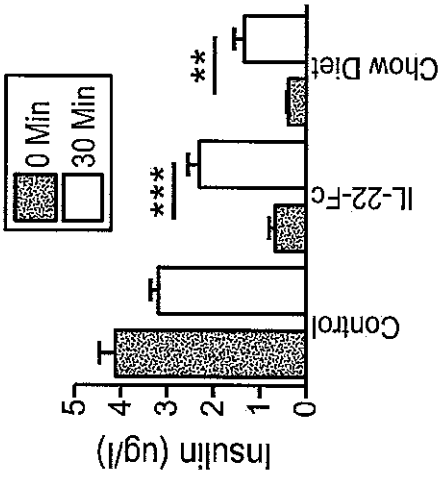


FIG. 23F

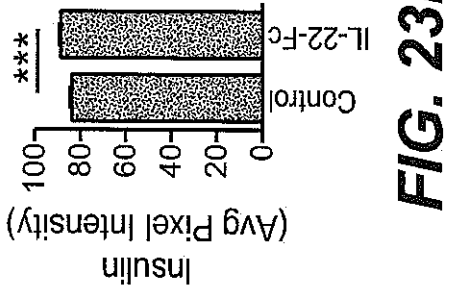


FIG. 23B

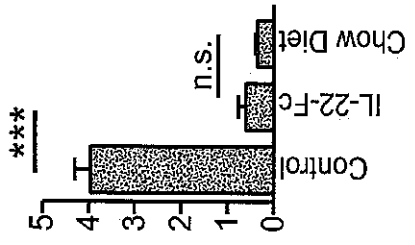


FIG. 23E

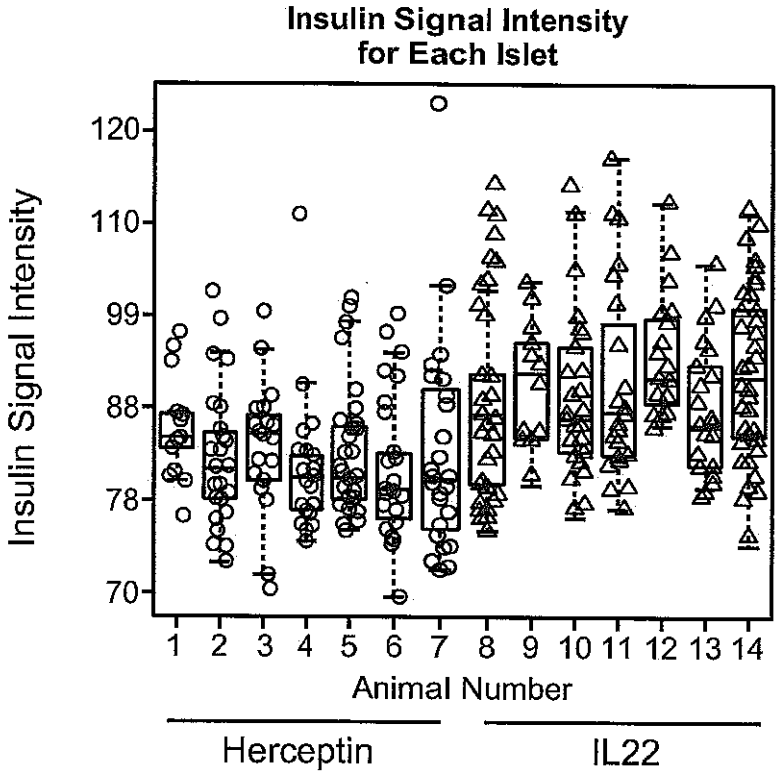


FIG. 24A

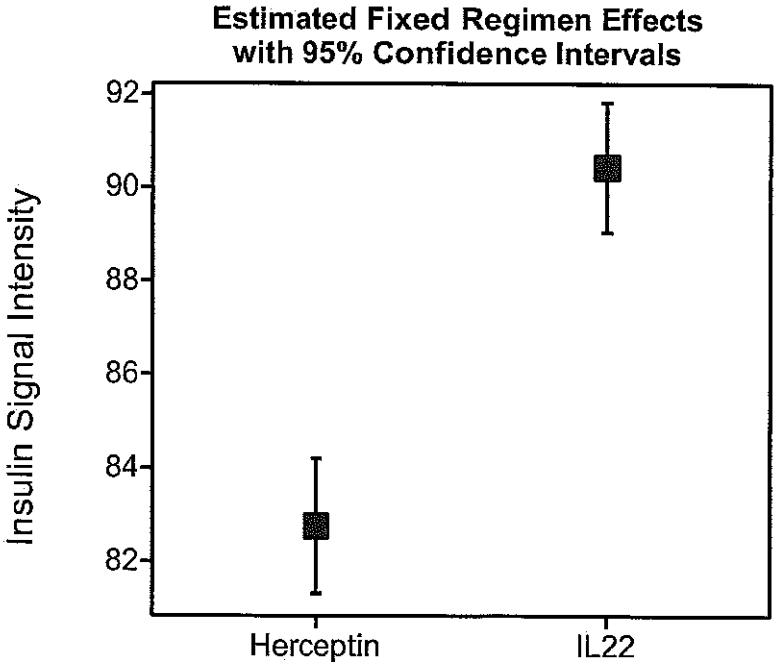


FIG. 24B

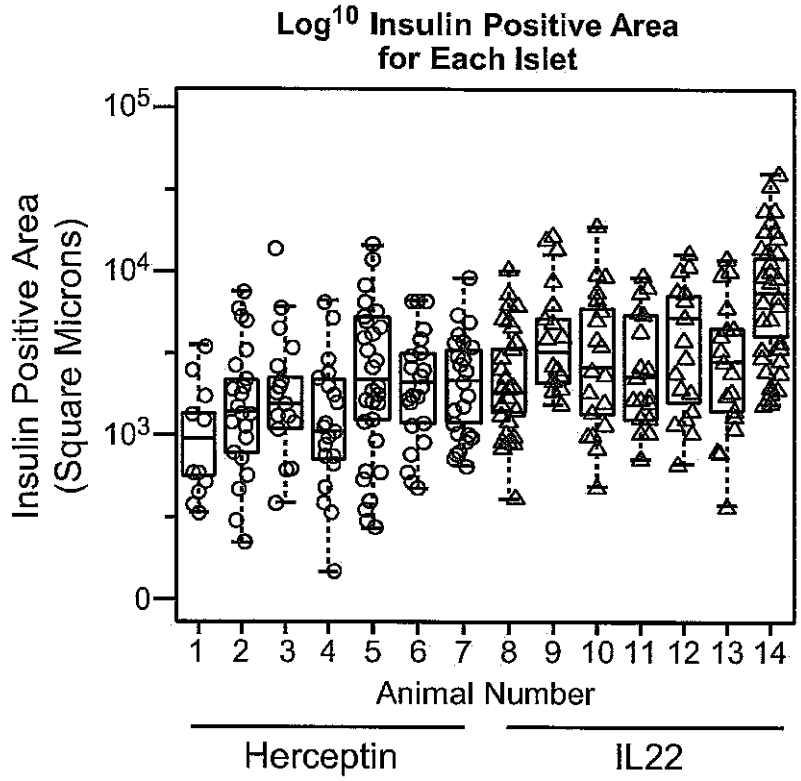


FIG. 25A

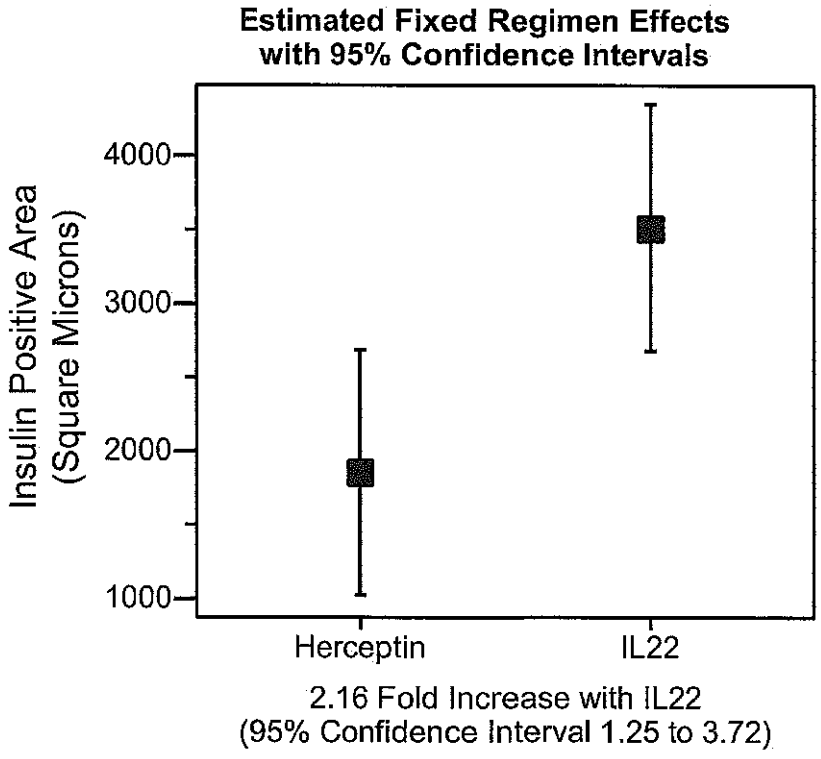


FIG. 25B

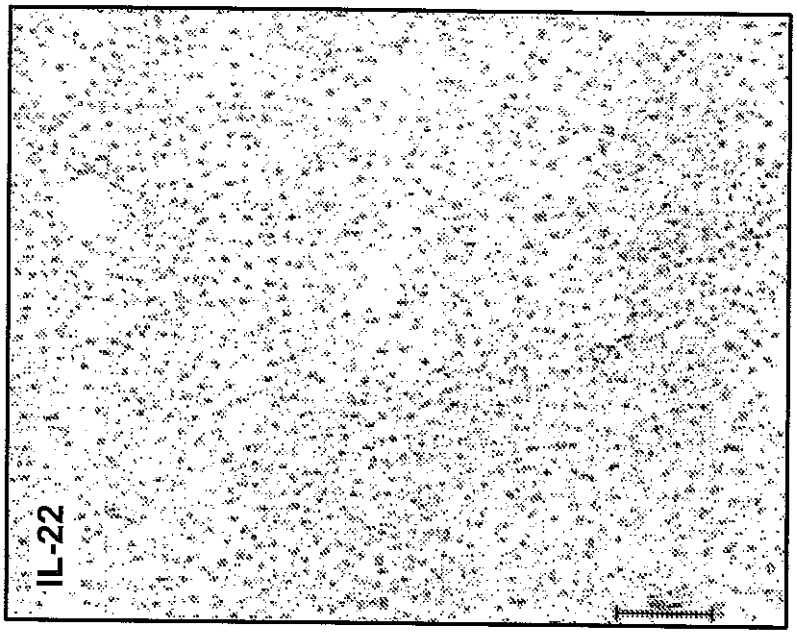


FIG. 26B

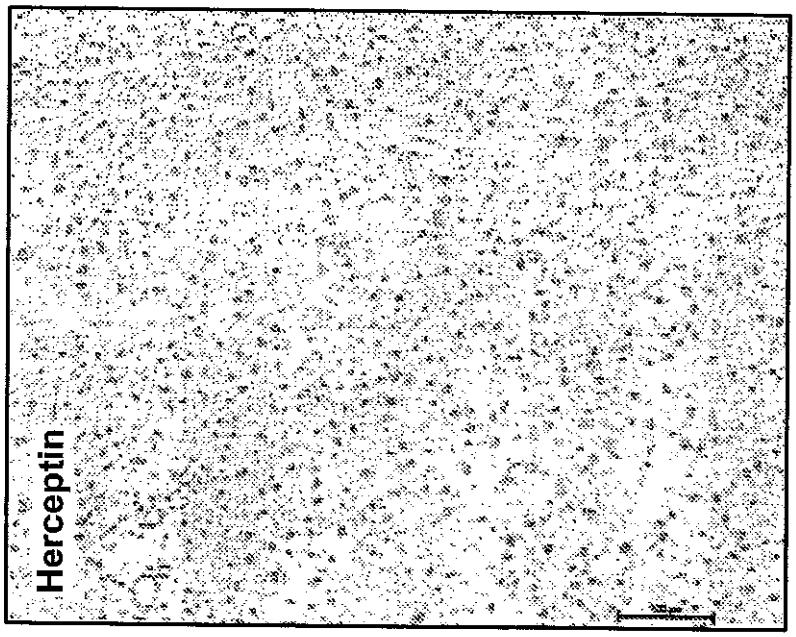


FIG. 26A

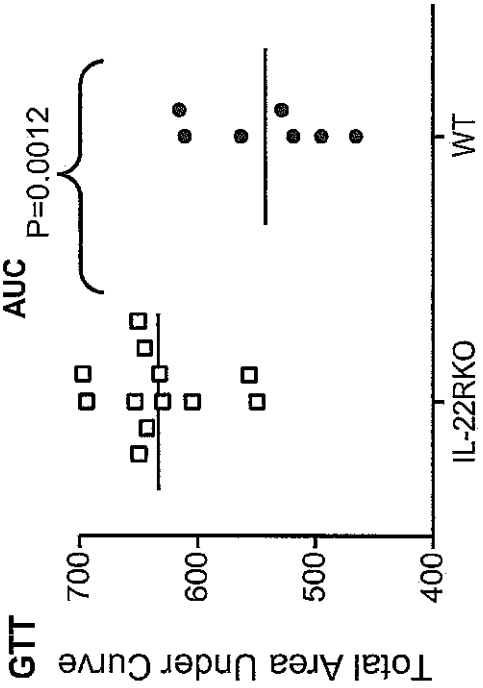


FIG. 27B

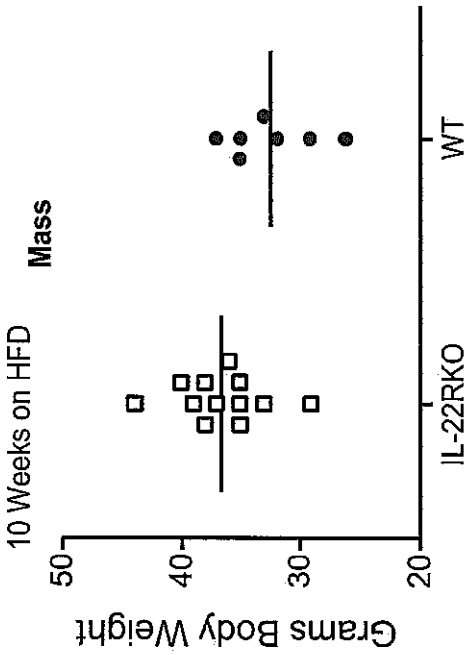


FIG. 28

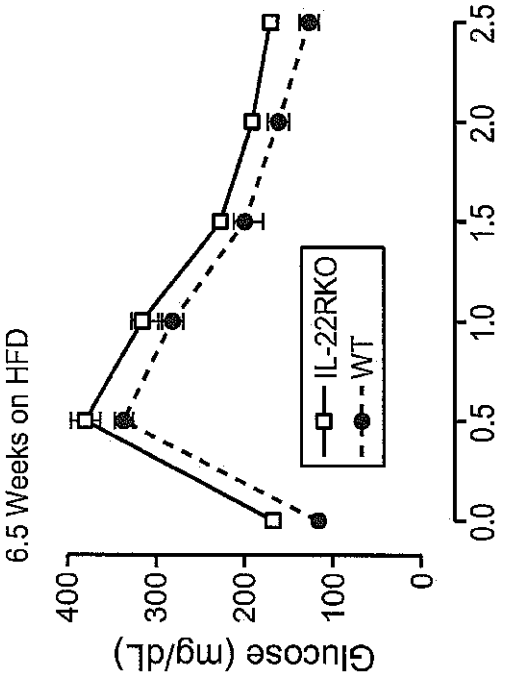


FIG. 27A

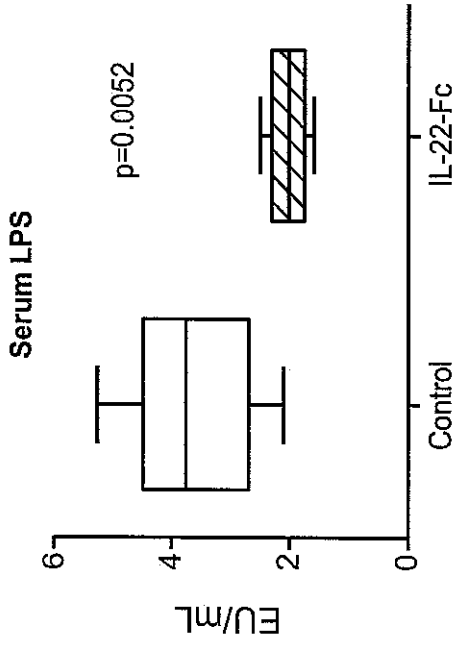


FIG. 29A

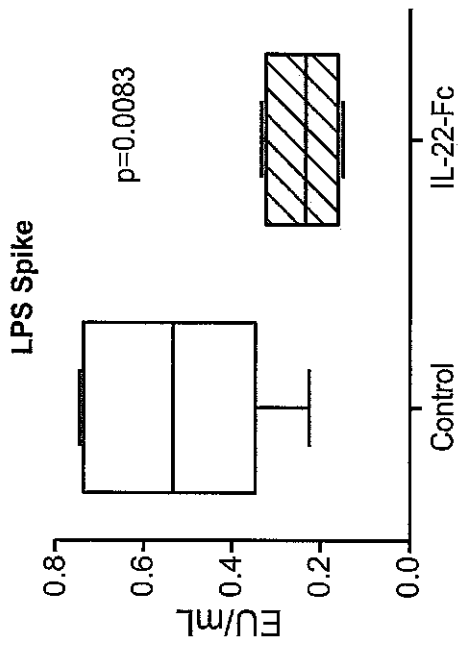


FIG. 29B

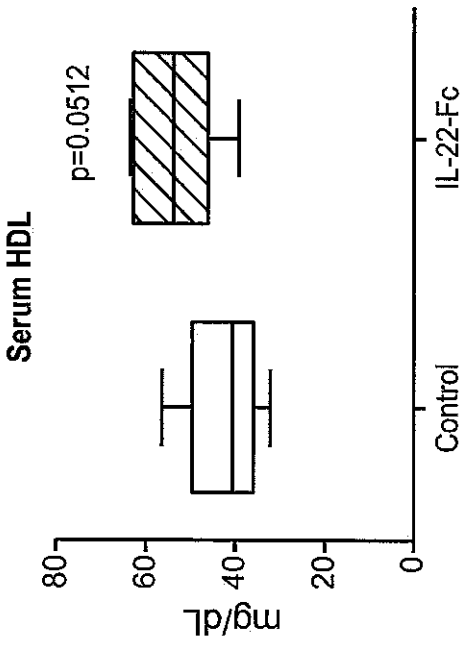


FIG. 29C

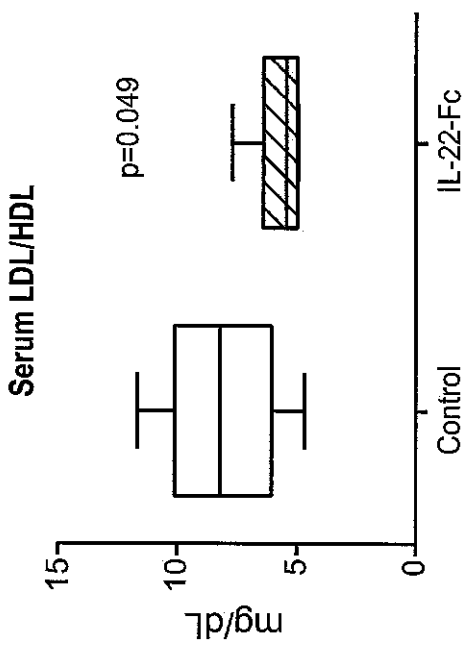


FIG. 29D

CTTCAGAACAGGTTCTCCTTCCCCAGTCACCAGTTGCTCGAGTTAGAATTGTCTGCA**ATG**GCCGCCC
TGCAGAAATCTGTGAGCTCTTTCCTTATGGGGACCCTGGCCACCAGCTGCCTCCTTCTCTTGGCCCT
CTTGGTACAGGGAGGAGCAGCTGCGCCCATCAGCTCCCACTGCAGGCTTGACAAGTCCAACTTCCAG
CAGCCCTATATCACCAACCGCACCTTCATGCTGGCTAAGGAGGCTAGCTTGGCTGATAACAACACAG
ACGTTCGTCTCATTGGGGAGAAACTGTTCCACGGAGTCAGTATGAGTGAGCGCTGCTATCTGATGA
AGCAGGTGCTGAACTTCACCCTTGAAGAAGTGCTGTTCCCTCAATCTGATAGGTTCCAGCCTTATAT
GCAGGAGGTGGTGCCCTTCCTGGCCAGGCTCAGCAACAGGCTAAGCACATGTCATATTGAAGGTGA
TGACCTGCATATCCAGAGGAATGTGCAAAAGCTGAAGGACACAGTGAAAAAGCTTGGAGAGAGTGG
AGAGATCAAAGCAATTGGAGAACTGGATTTGCTGTTTATGTCTCTGAGAAATGCCTGCATT**TGA**CC
AGAGCAAAGCTGAAAAATGAATAACTAACCCCCTTTCCCTGCTAGAAATAACAATTAGATGCCCCA
AAGCGATTTTTTTTAACCAAAAGGAAGATGGGAAGCCAAACTCCATCATGATGGGTGGATTCCAAA
TGAACCCCTGCGTTAGTTACAAAGGAAACCAATGCCACTTTTGTTTATAAGACCAGAAGGTAGACT
TTCTAAGCATAGATATTTATTGATAACATTTCATTGTAACTGGTGTTCTATACACAGAAAACAATT
TATTTTTTAAATAATTGTCTTTTTCCATAAAAAAGATTACTTTCCATTCCTTTAGGGGAAAAAACC
CCTAAATAGCTTCATGTTTCCATAATCAGTACTTTATATTTATAAATGTATTTATTATTATTATAA
GACTGCATTTTATTTATATCATTTTATTAATATGGATTTATTTATAGAAACATCATTCGATATTGC
TACTTGAGTGTAAGGCTAATATTGATATTTATGACAATAATTATAGAGCTATAACATGTTTATTTG
ACCTCAATAAACACTTGGATATCCC

SEQ ID NO. 70

FIG. 30

MAALQKSVSSFLMGTLATSCLLLLALLVQGGAAAPISSHCRLDKSNFQQPVITNRTFMLAKEASLADN
NTDVRLIGEKLFHGVSMSERCYLMKQVLNFTLEEVLFPQSDRFQPYMQEVVPFLARLSNRLSTCHIE
GDDLHIQRNVQKLKDTVKKLGESGEIKAIGELDLLFMSLRNACI

SEQIDNO.71

Signal peptide: amino acids 1-33

FIG. 31

mIL22mIgG2a

Protein

MAVLQKSMSFSLMGTLAASCLLLIALWAQEANALPVNTRCKLEVSNFQQPYIVNRTFMLA
KEASLADNNTDVRLIGEKLFRGVSAKDQCYLMKQVLNFTLEDVLLPQSDRFQPYMQEVVP
FLTKLSNQLSSCHISGDDQNIQKNVRRLKETVKKLGESGEIKAIGELDLLFMSLRNACVAR
GPTIKPCPPCKCPAPNLLGGPSVFIFPPKIKDVLMISLSPIVTCVVVDVSEDDPDVQISWFVN
NVEVHTAQTQTHREDYNSTLRVVSALPIQHQDWMSGKEFKCKVNNKDLPAPIERTISKPK
GSVRAPQVYVLPPPEEEMTKKQVTLTCMYTDFMPEDIYVEWTNNGKTELNYKNTEPVLD
SDGSYFMYSKLRVEKKNWVERNSYSCSYVHEGLHNHHTTKSFSRTPGK

SEQ. ID. NO. 73

FIG. 32A

mIL22mIgG2a
DNA sequence:

ATGGCTGTCCTGCAGAAATCTATGAGTTTTTCCCTTATGGGGACTTTGGCCGCCAGCTG
CCTGCTTCTCATTGCCCTGTGGGCCCAGGAGGCAAATGCGC
TGCCCGTCAACACCCGGTGCAAGCTTGAGGTGTCCAACTTCCAGCAGCCATACATCGT
CAACCGCACCTTTATGCTGGCCAAGGAGGCCAGCCTTGCAGA
TAACAACACAGATGTCCGGCTCATCGGGGAGAAACTGTTCCGAGGAGTCAGTGCTAAG
GATCAGTGCTACCTGATGAAGCAGGTGCTCAACTTCACCCTG
GAAGACGTTCTGCTCCCCCAGTCAGACAGGTTCCAGCCCTACATGCAGGAGGTGGTGC
CTTTCCTGACCAAACTCAGCAATCAGCTCAGCTCCTGTCACA
TCAGCGGTGACGACCAGAACATCCAGAAGAATGTCAGAAGGCTGAAGGAGACAGTGA
AAAAGCTTGGAGAGAGTGGAGAGATCAAGGCGATTGGGGAACT
GGACCTGCTGTTTATGTCTCTGAGAAATGCTTGCGTCGCTCGAGGACCCACAATCAAG
CCCTGTCCTCCATGCAAATGCCCAGCACCTAACCTCTTGGGT
GGACCATCCGTCTTCATCTTCCCTCCAAAGATCAAGGATGTACTCATGATCTCCCTGAG
CCCCATAGTCACATGTGTGGTGGTGGATGTGAGCGAGGATG
ACCCAGATGTCCAGATCAGCTGGTTTGTGAACAACGTGGAAGTACACACAGCTCAGAC
ACAAACCCATAGAGAGGATTACAACAGTACTCTACGCGTGGT
CAGTGCCCTCCCCATCCAGCACCAGGACTGGATGAGTGGCAAGGAGTTCAAATGCAAG
GTCAACAACAAAGACCTCCCAGCGCCCATCGAGAGAACCATC
TCAAAACCCAAAGGGTCAGTAAGAGCTCCACAGGTATATGTCTTGCCTCCACCAGAAG
AAGAGATGACTAAGAAACAGGTCACTCTGACCTGCATGGTCA
CAGACTTCATGCCTGAAGACATTTACGTGGAGTGGACCAACAACGGGAAAACAGAGC
TAAACTACAAGAACACTGAACCAGTCCTGGACTCTGATGGTTC
TTACTTCATGTACAGCAAGCTGAGAGTGGAAAAGAAGAACTGGGTGGAAAGAAATAG
CTACTCCTGTTCAGTGGTCCACGAGGGTCTGCACAATCACCAC
ACGACTAAGAGCTTCTCCCGGACTCCGGGTAAATGA

SEQ. ID. NO. 72

FIG. 32B

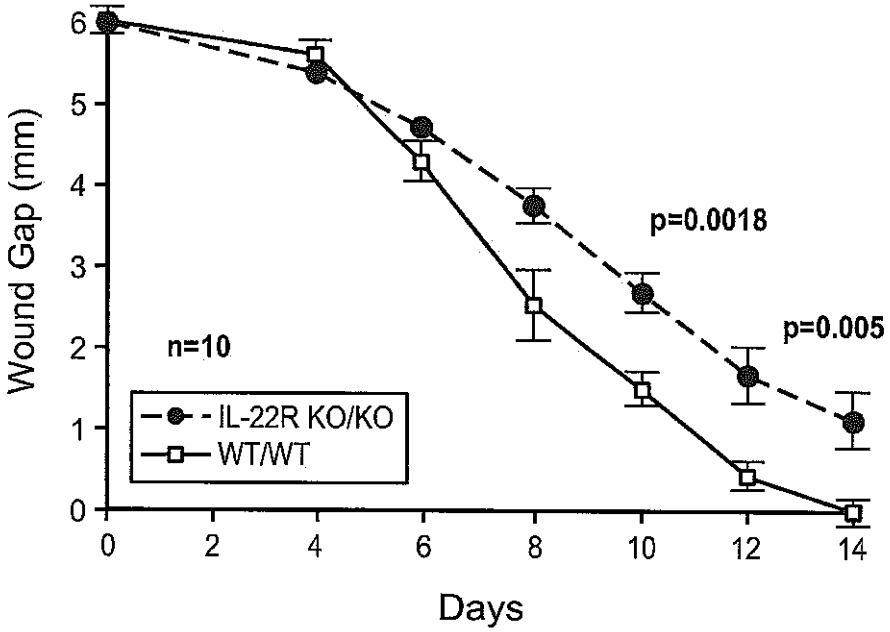


FIG. 33

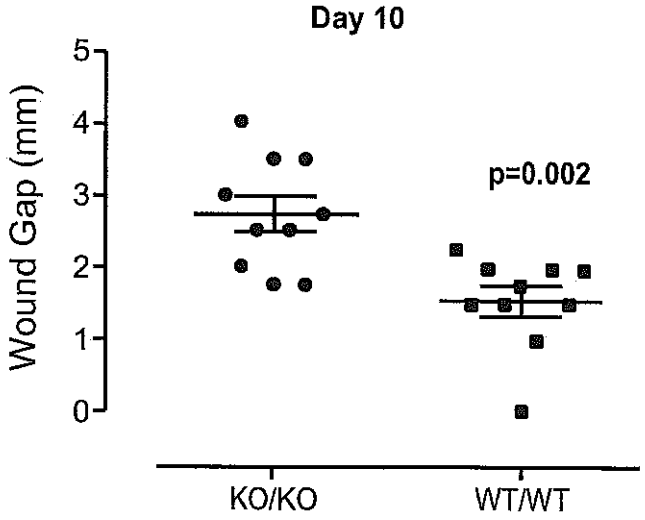


FIG. 34A

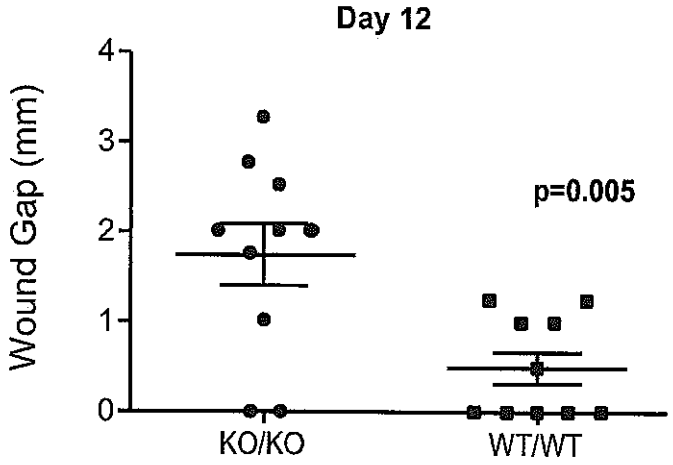


FIG. 34B

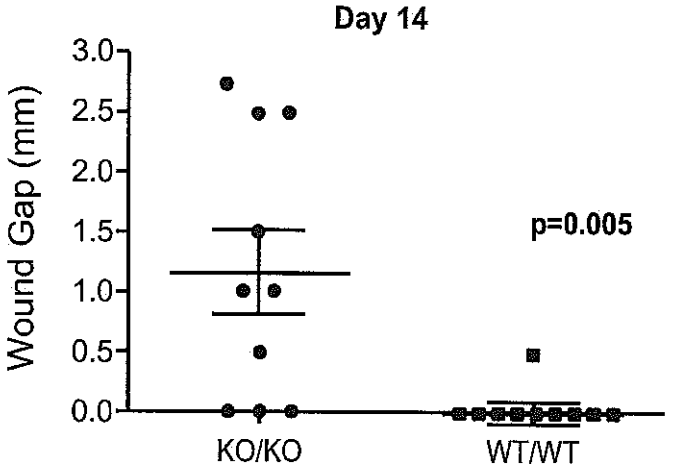


FIG. 34C

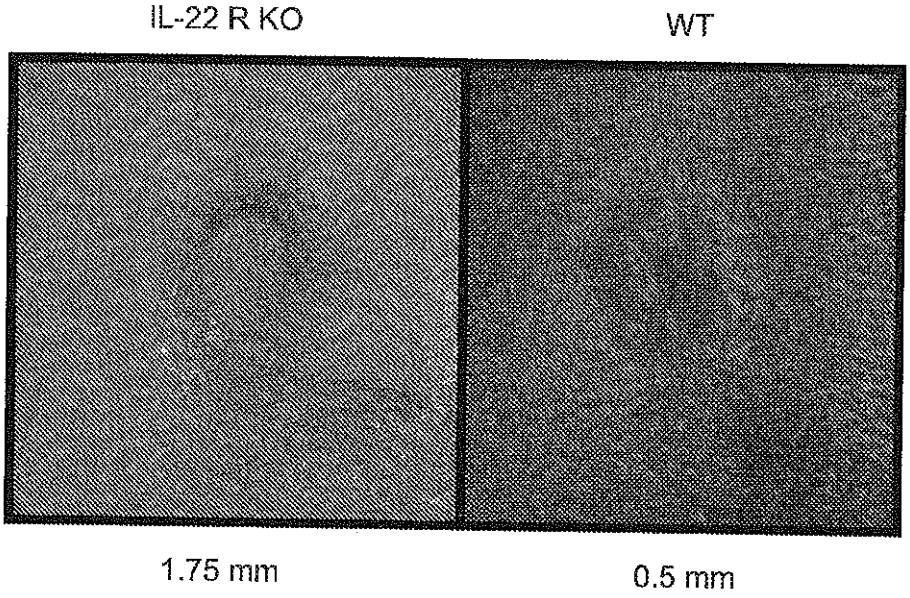


FIG. 34D

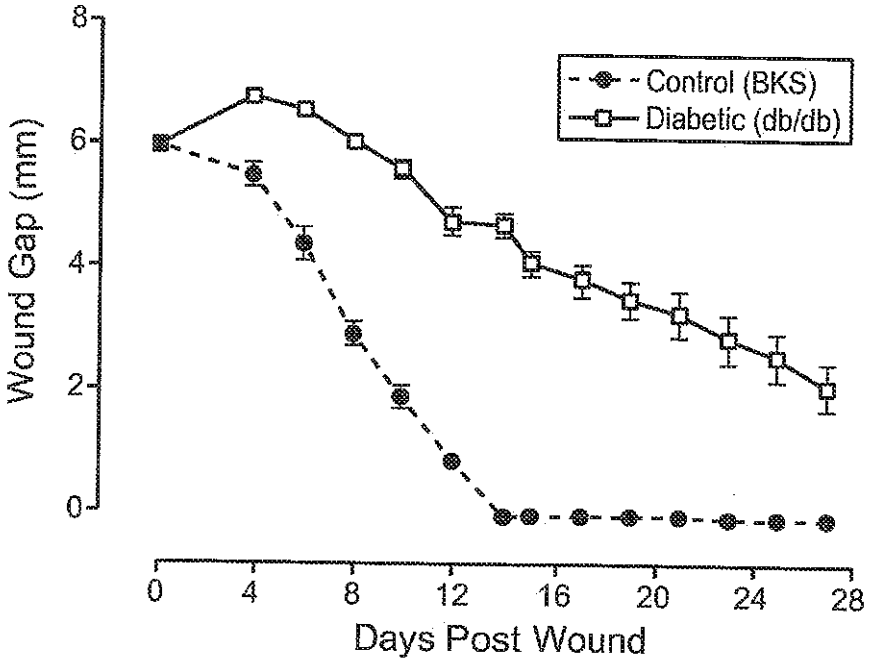


FIG. 35A

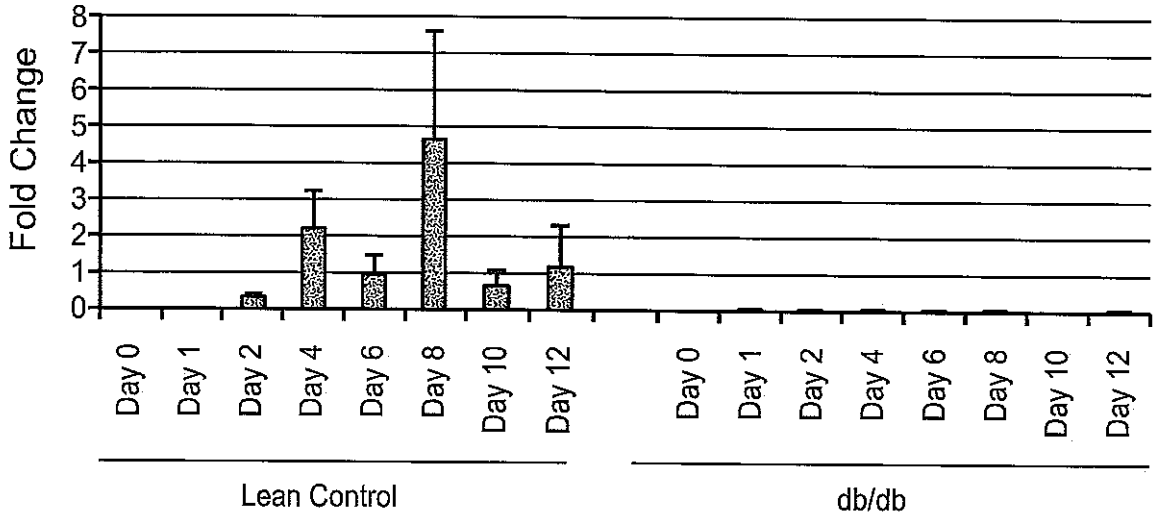


FIG. 35B

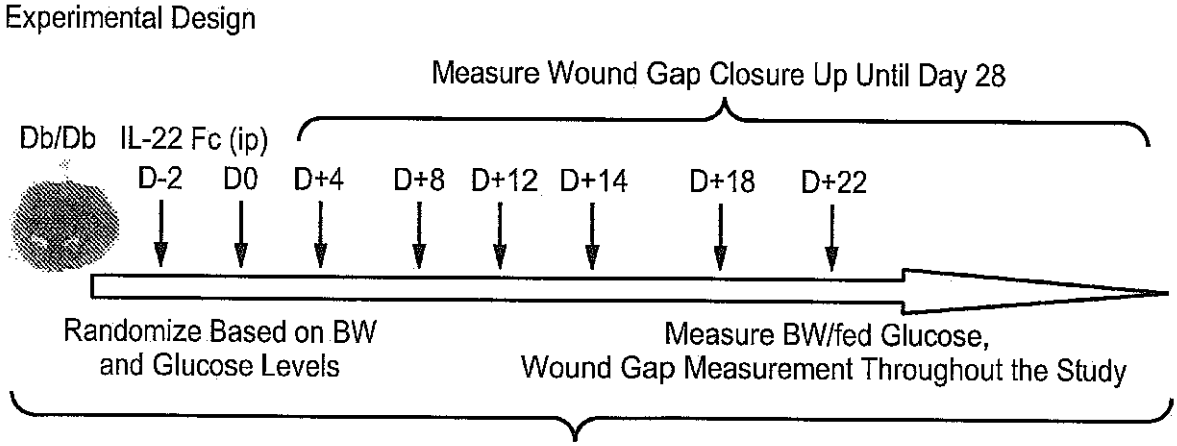


FIG. 36

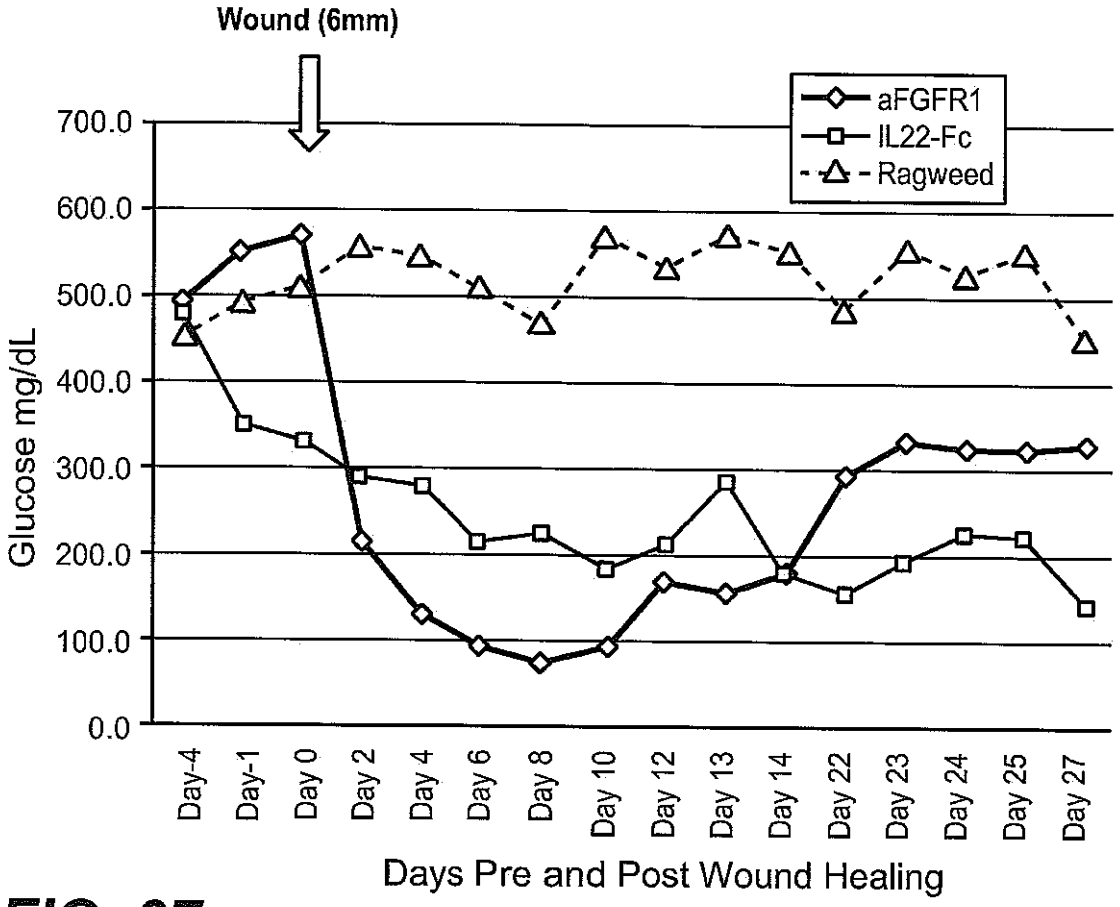

Wound (6mm)
aFGFR1
IL22-Fc
Ragweed
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
Glucose mg/dL
Day-4
Day-1
Day 0
Day 2
Day 4
Day 6
Day 8
Day 10
Day 12
Day 13
Day 14
Day 22
Day 23
Day 24
Day 25
Day 27
Days Pre and Post Wound Healing

FIG. 37

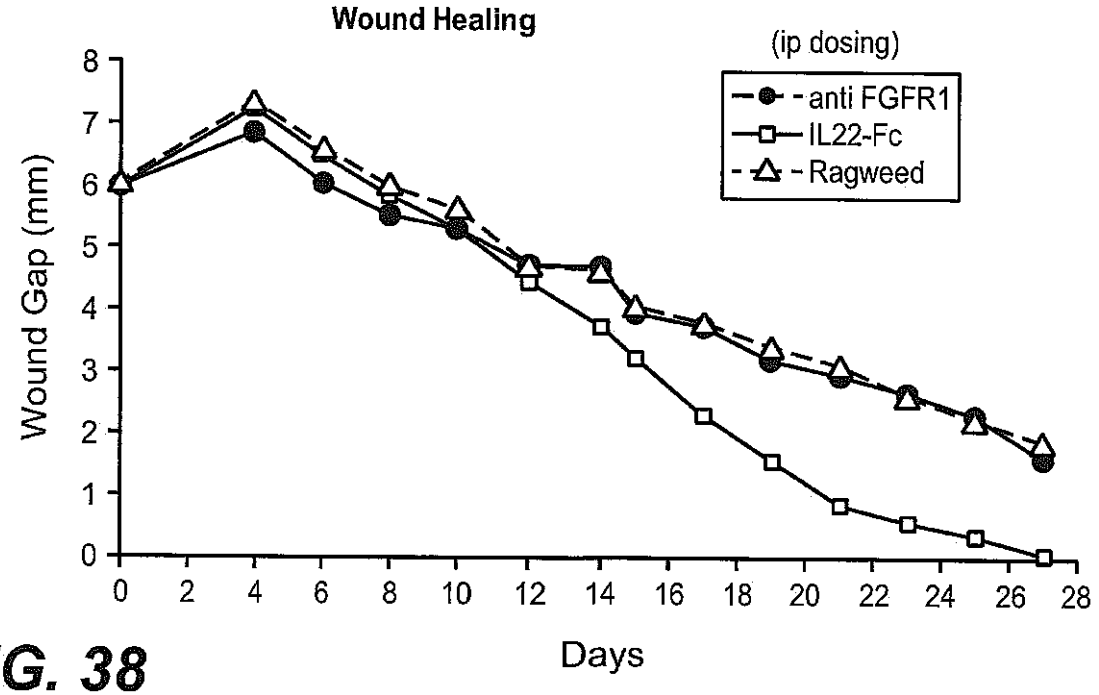

Wound Healing
(ip dosing)
anti FGFR1
IL22-Fc
Ragweed
Wound Gap (mm)
0
1
2
3
4
5
6
7
8
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
Days

FIG. 38

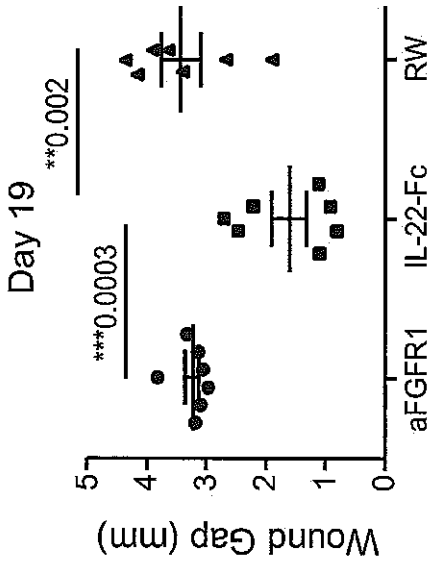


FIG. 39B

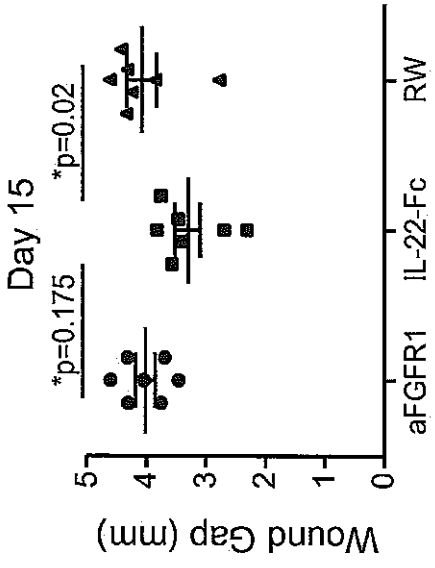


FIG. 39A

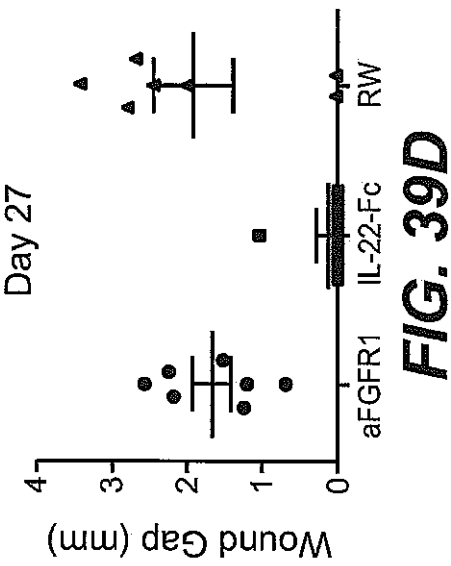


FIG. 39D

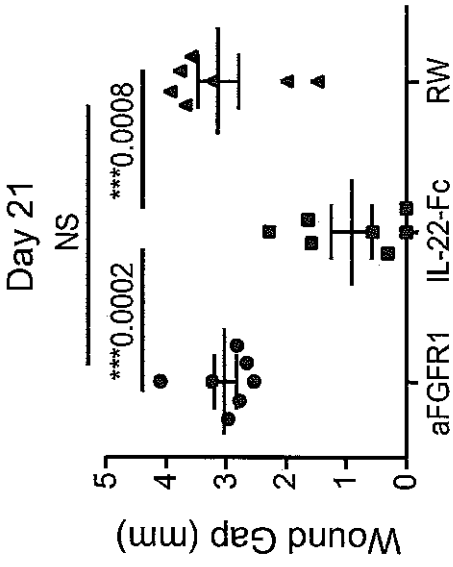


FIG. 39C

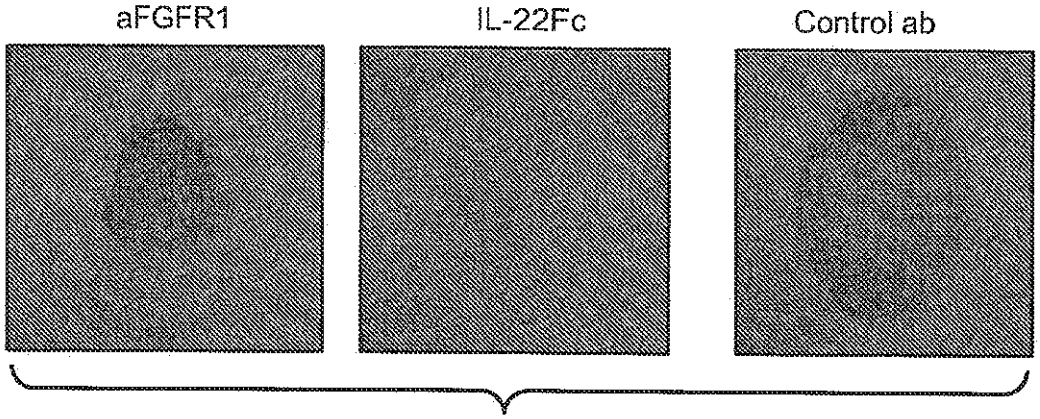


FIG. 39E

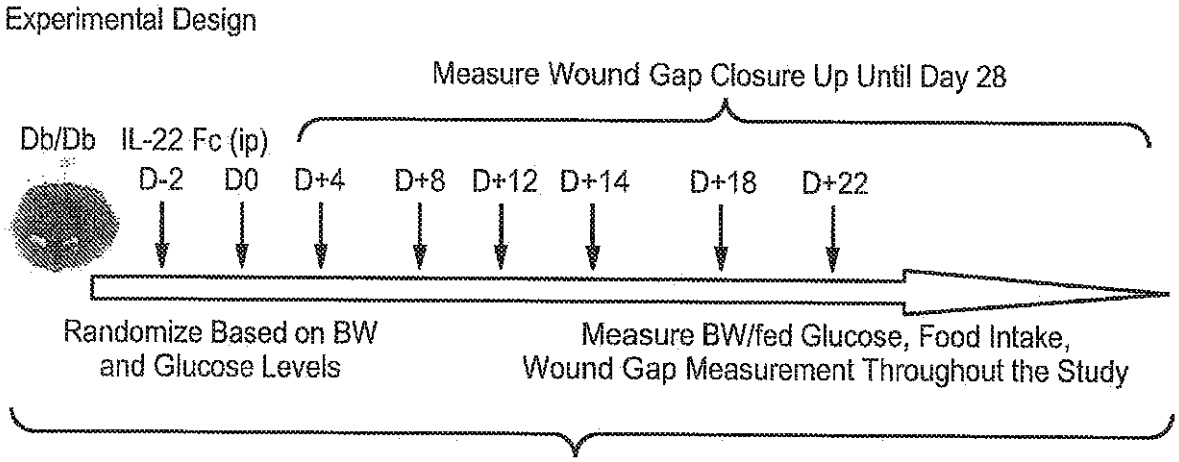


FIG. 40

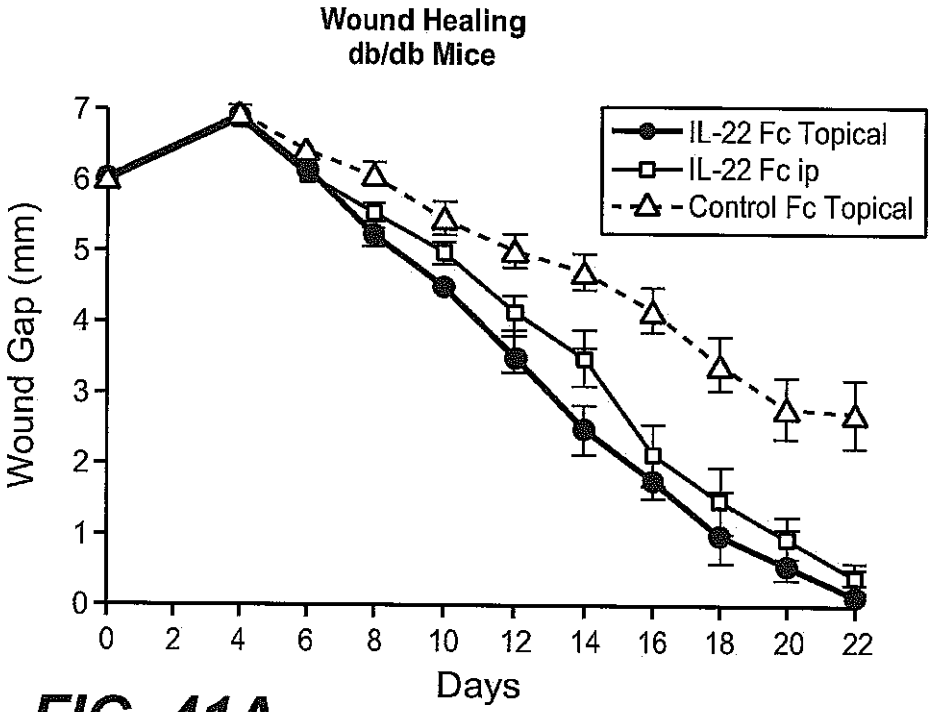


FIG. 41A

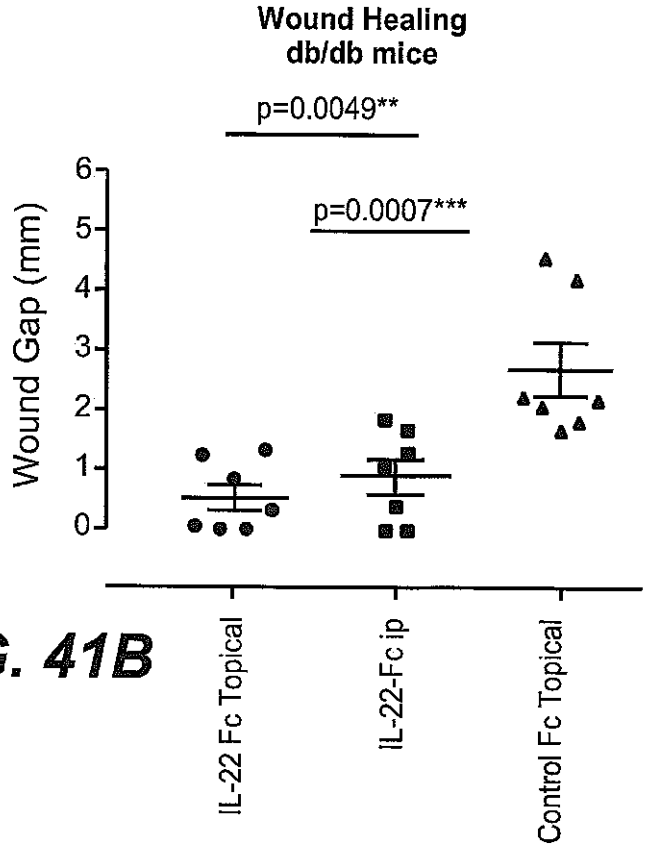


FIG. 41B

Control Antibody:

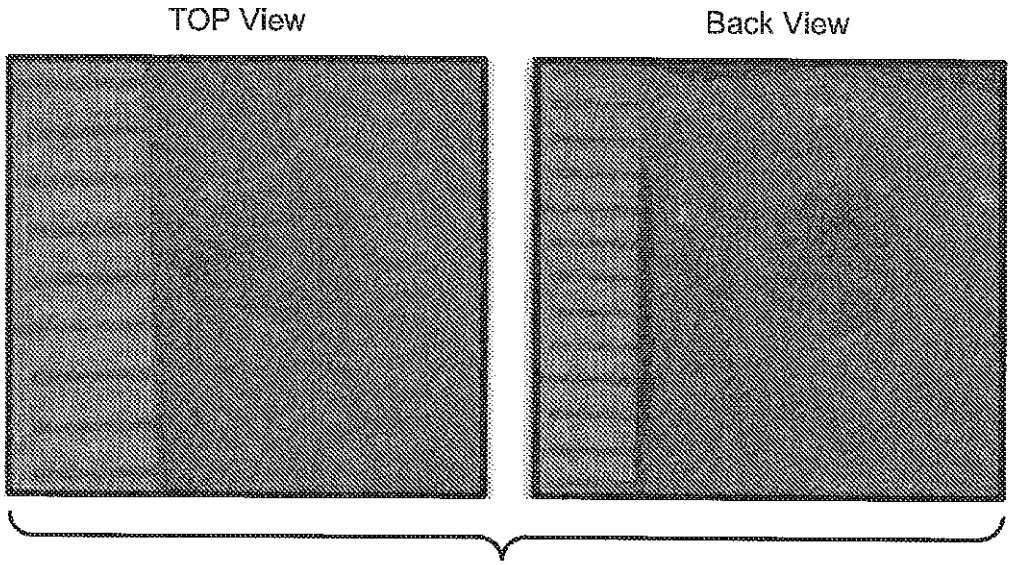


FIG. 42A

IL-22Fc:

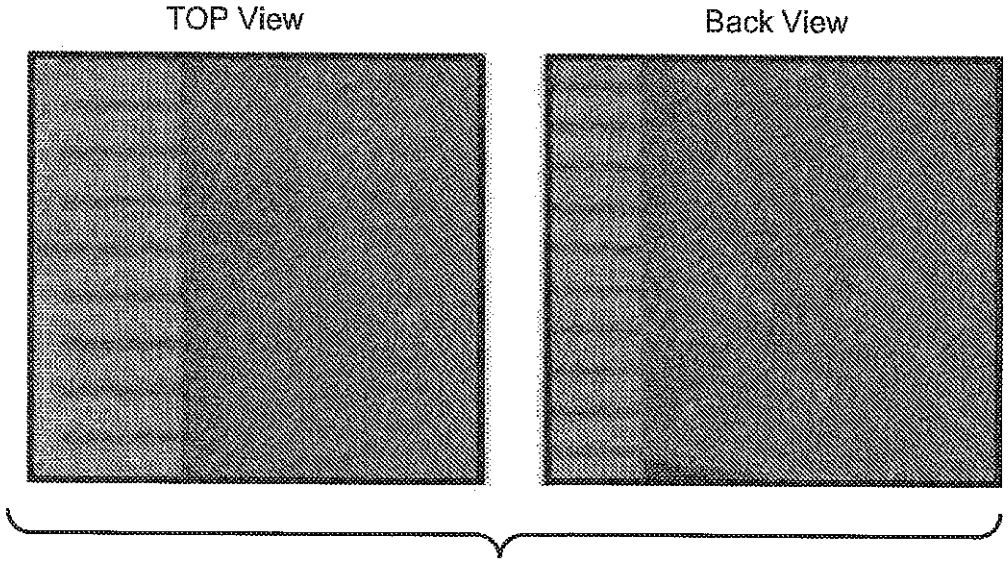


FIG. 42B

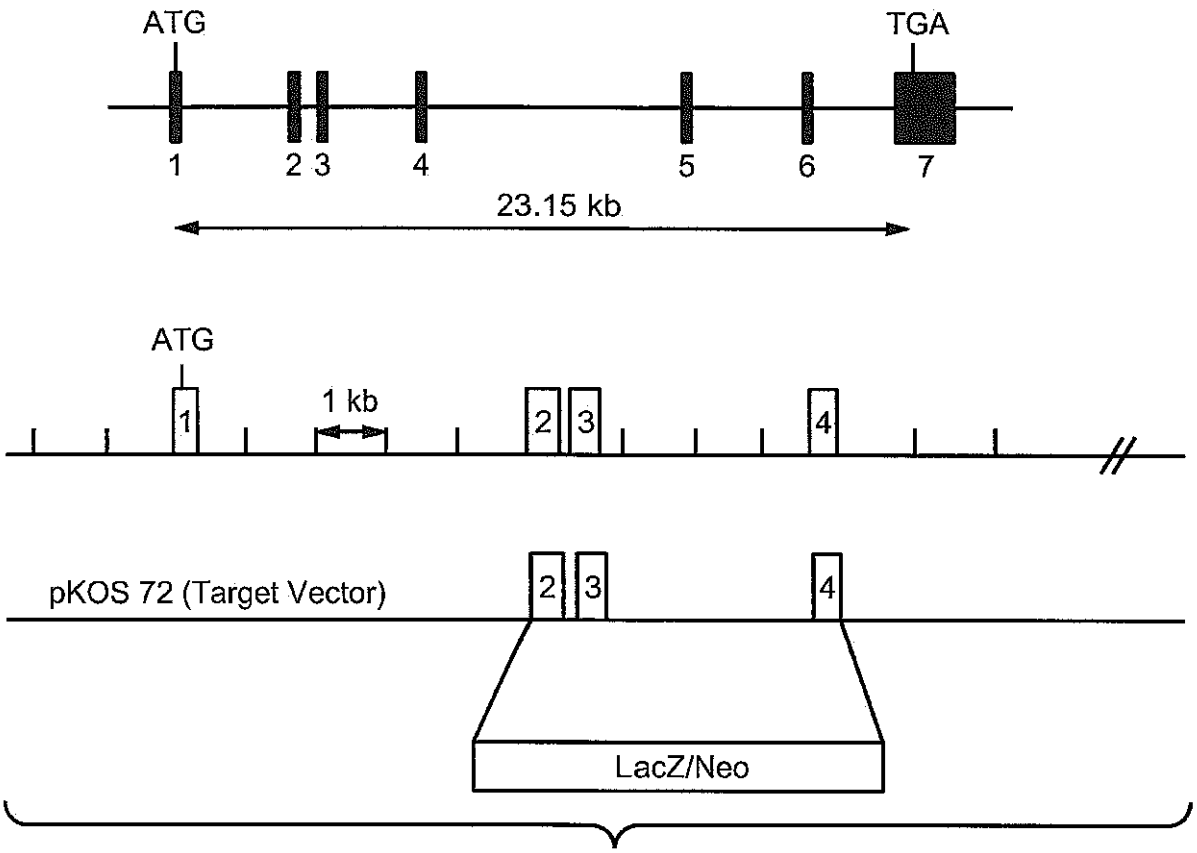


FIG. 43A

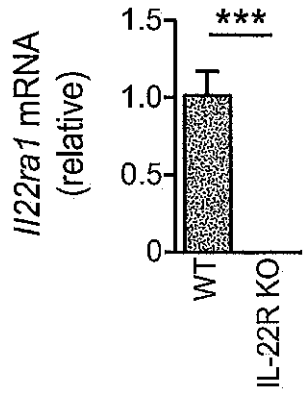


FIG. 43B

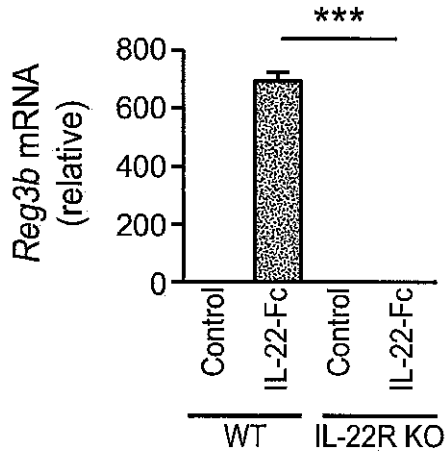


FIG. 43C

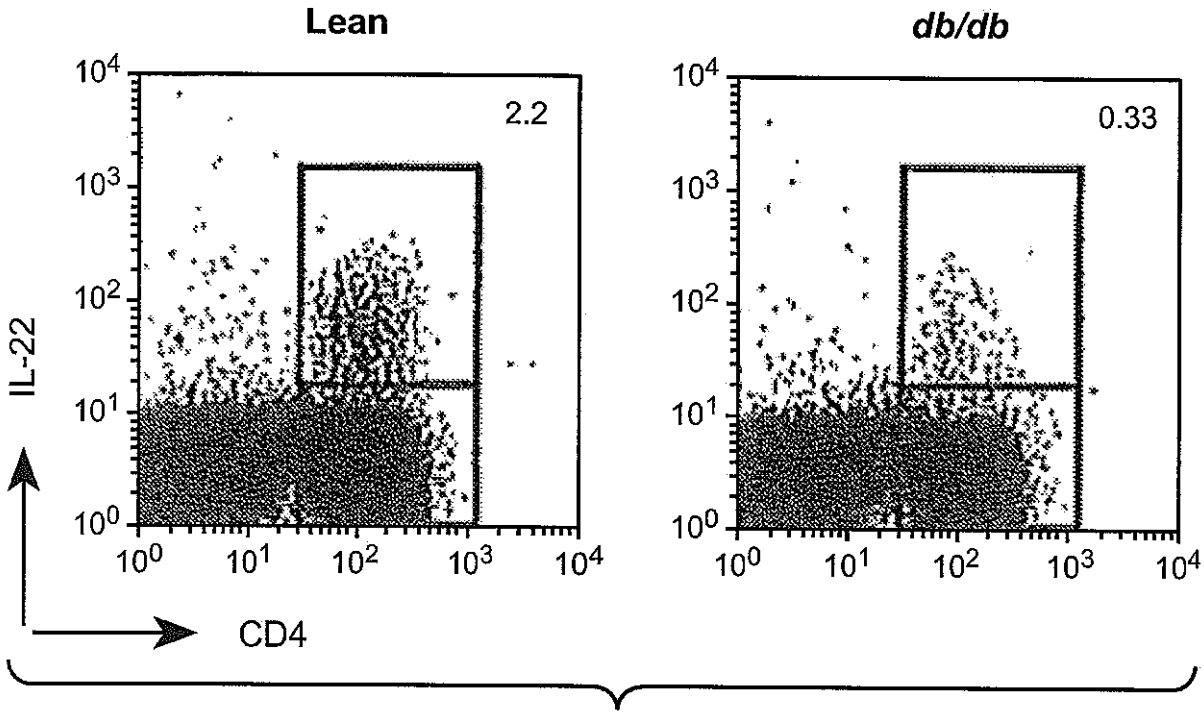


FIG. 44A

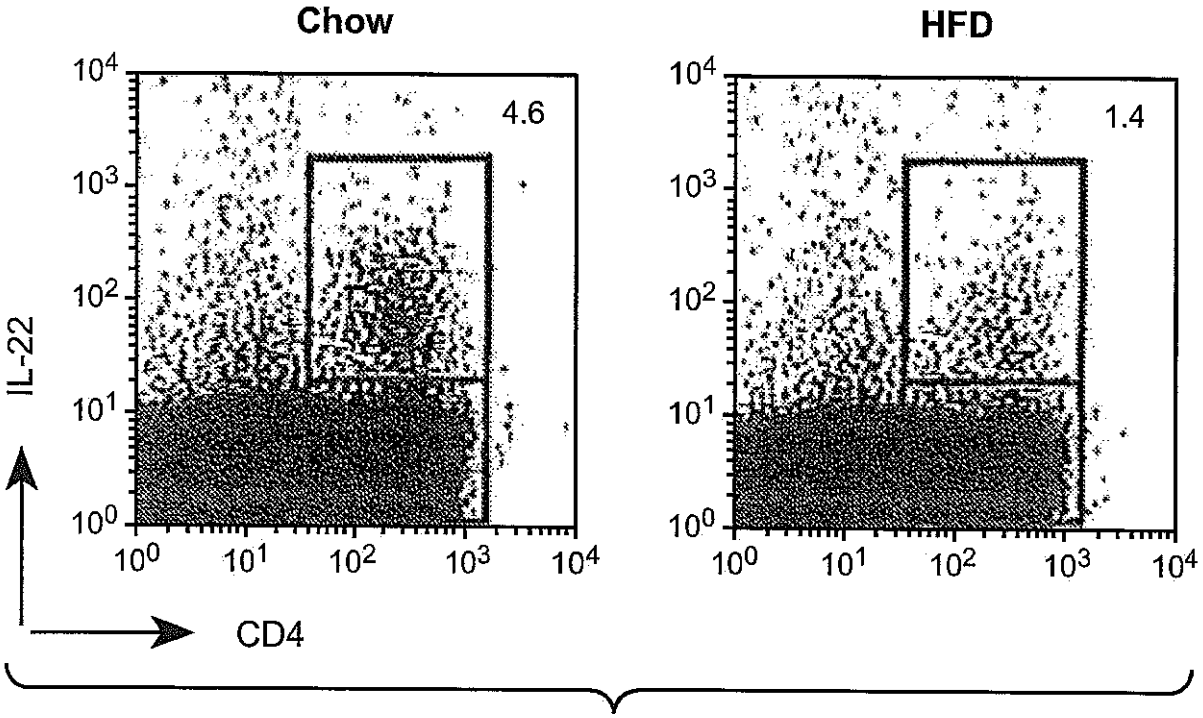


FIG. 44C

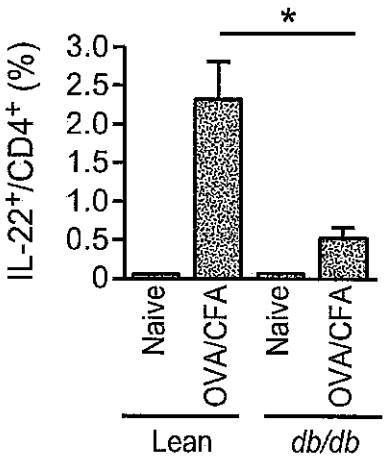


FIG. 44B

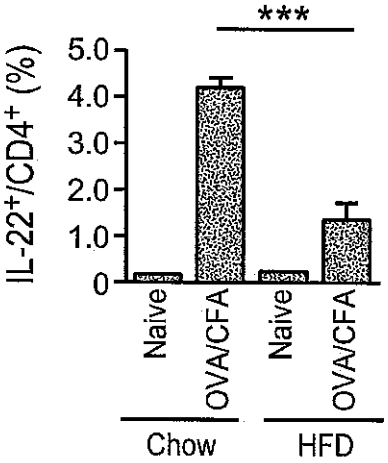


FIG. 44D

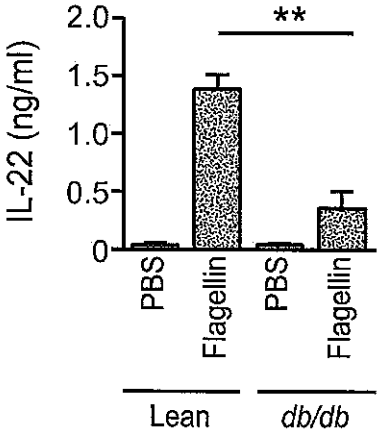


FIG. 44E

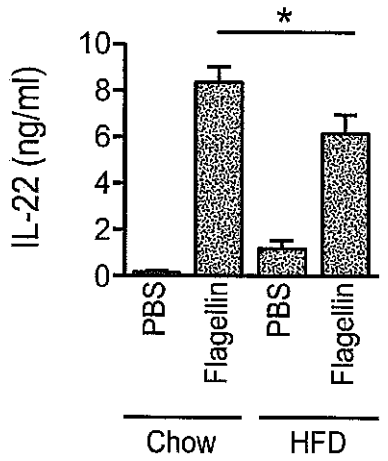


FIG. 44F

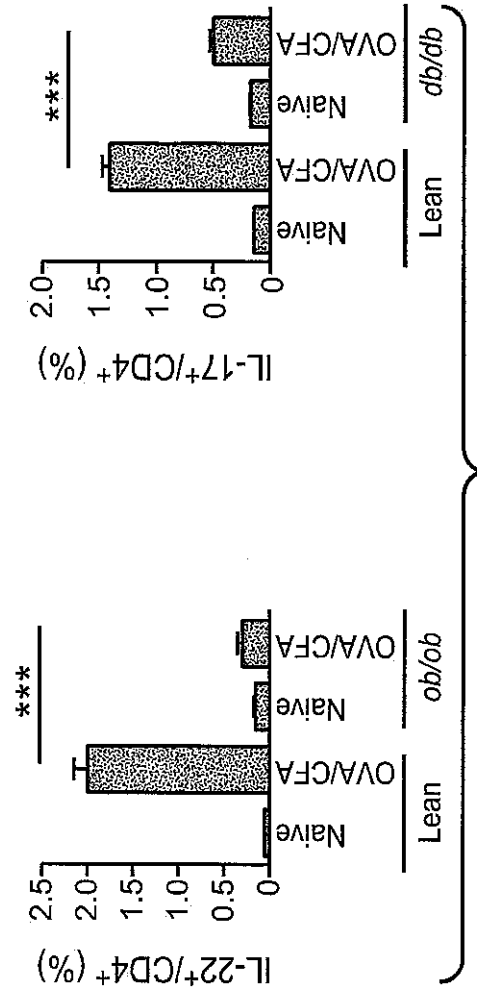


FIG. 45B

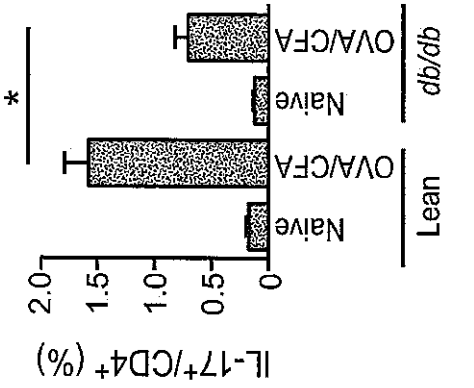


FIG. 45A

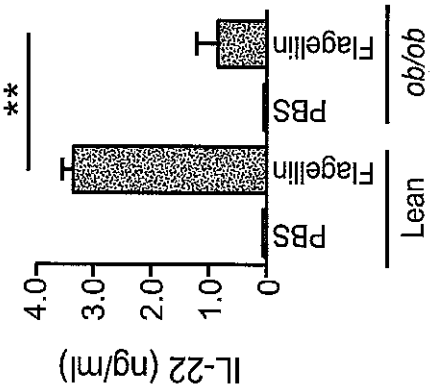


FIG. 45E

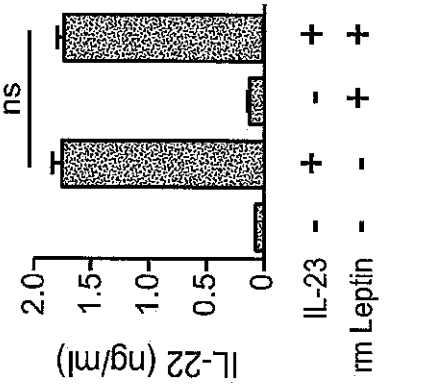


FIG. 45D

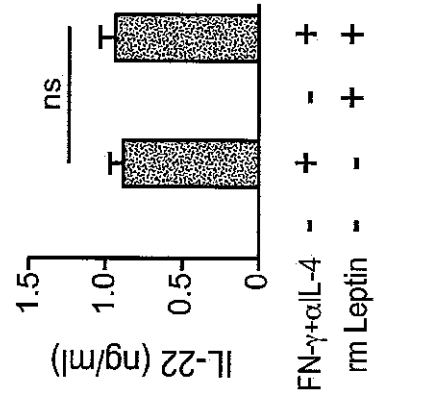


FIG. 45C

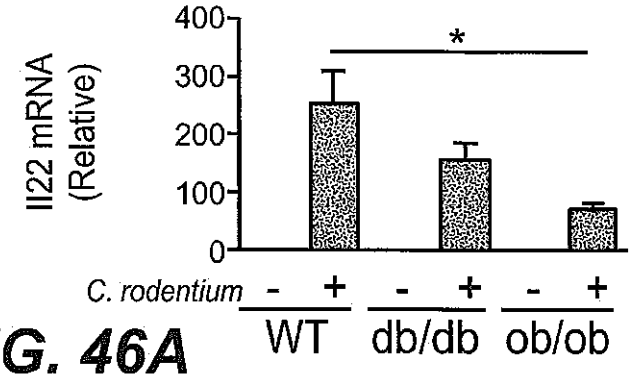


FIG. 46A

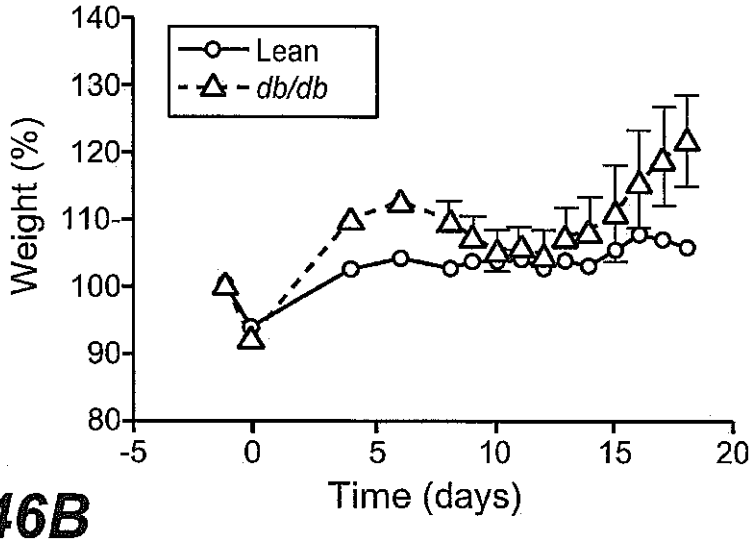


FIG. 46B

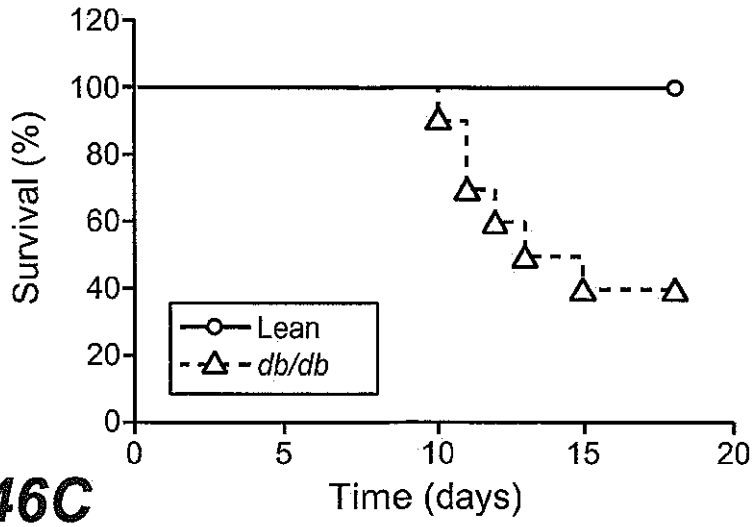


FIG. 46C

Lean

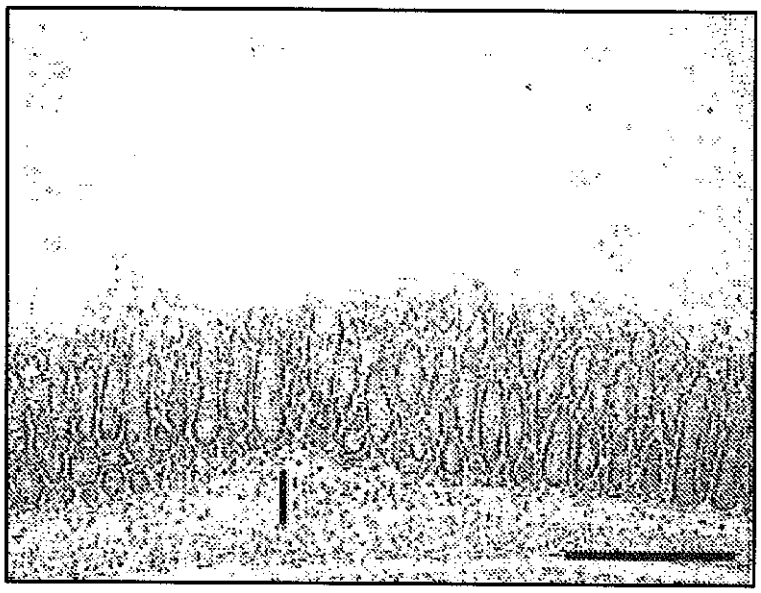


FIG. 46D

db/db

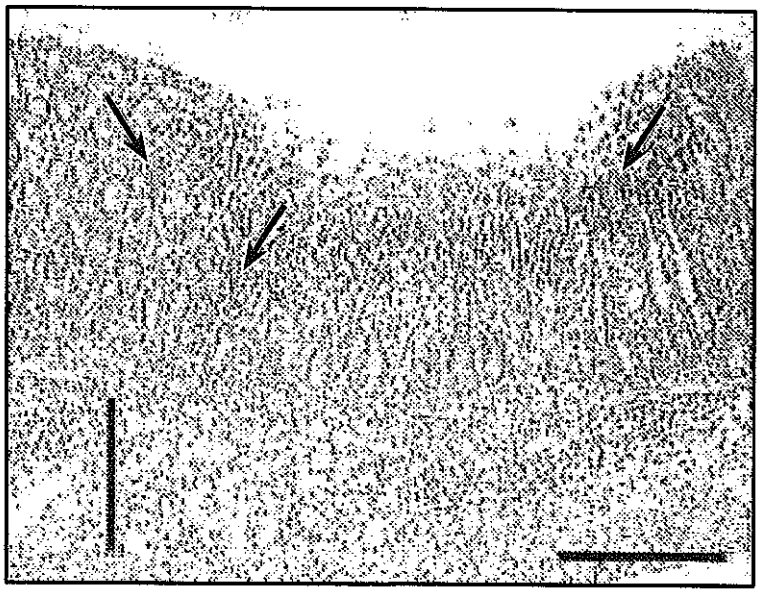


FIG. 46E

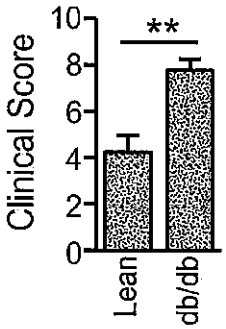


FIG. 46F

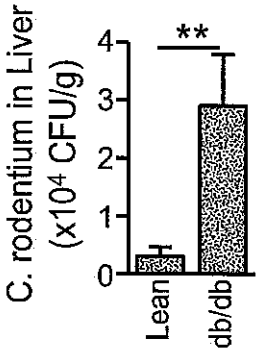


FIG. 46G

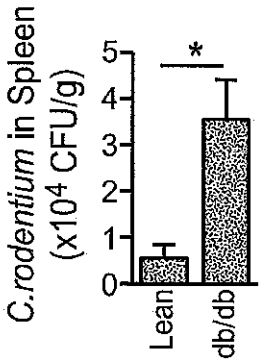


FIG. 46H

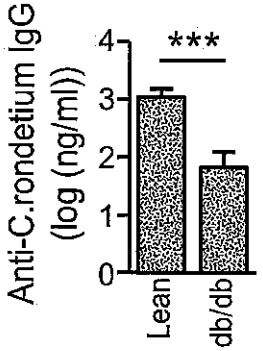


FIG. 46I

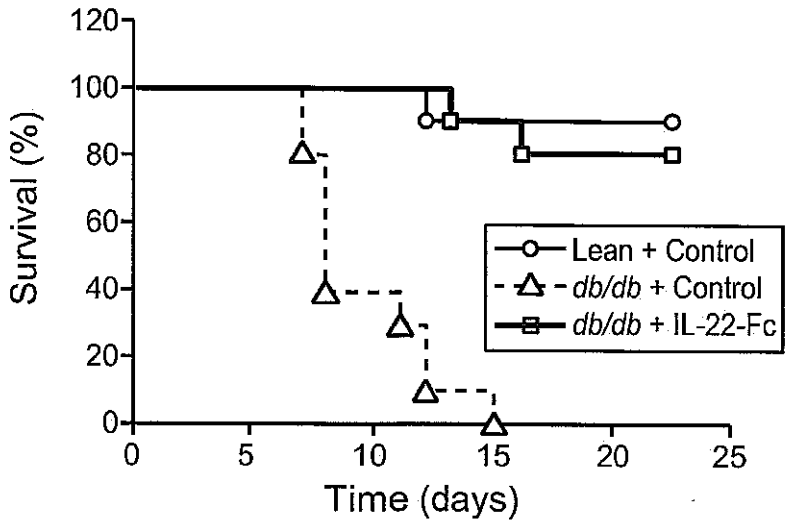


FIG. 46J

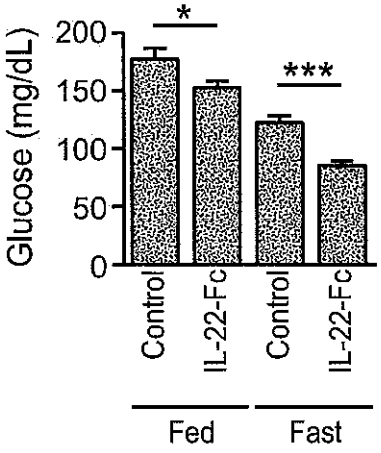


FIG. 47A

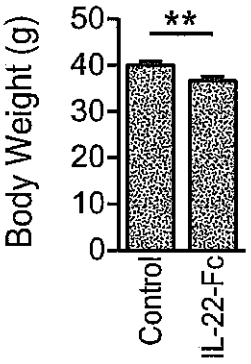


FIG. 47B

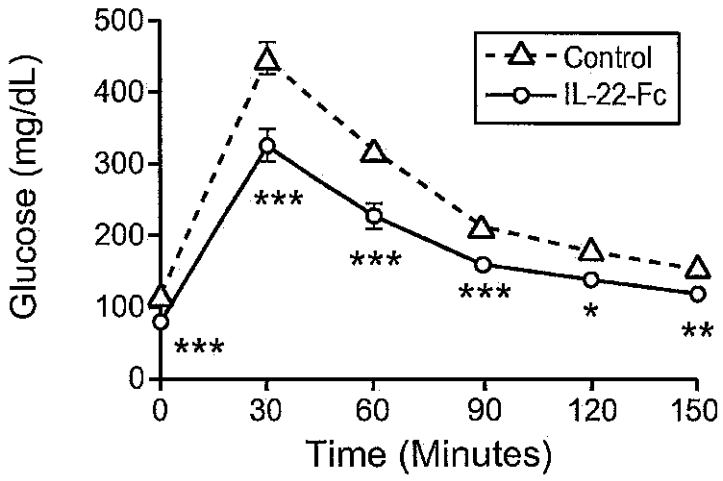
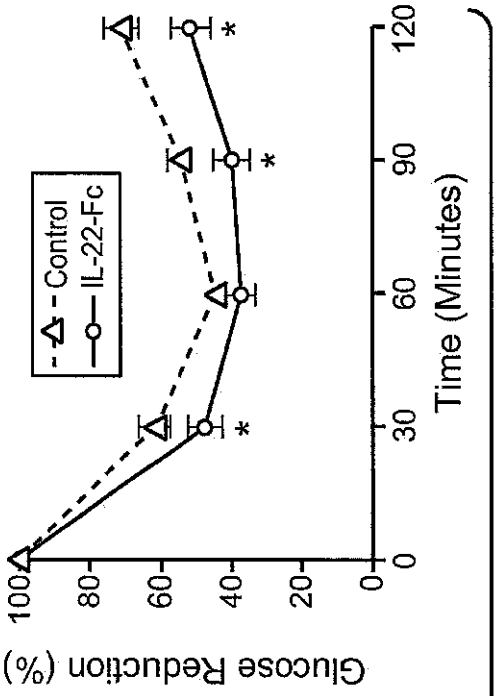


FIG. 47C



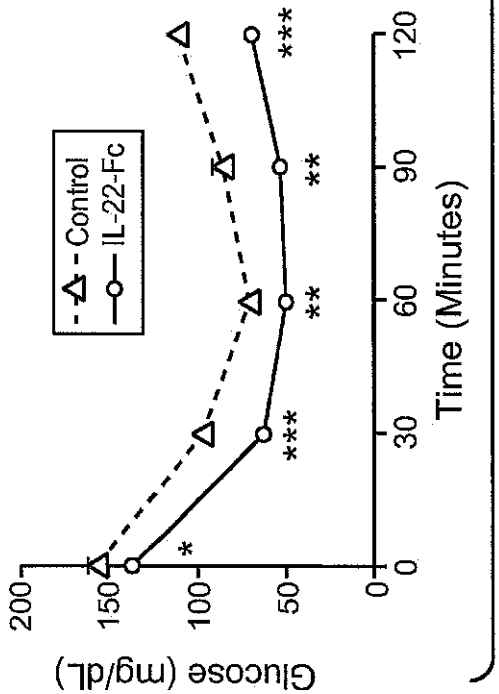


FIG. 47D

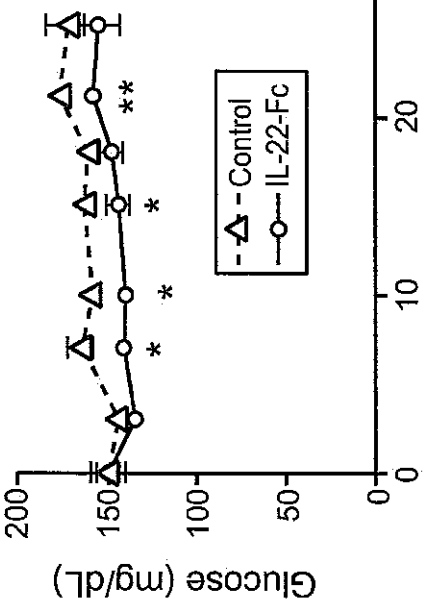


FIG. 48B

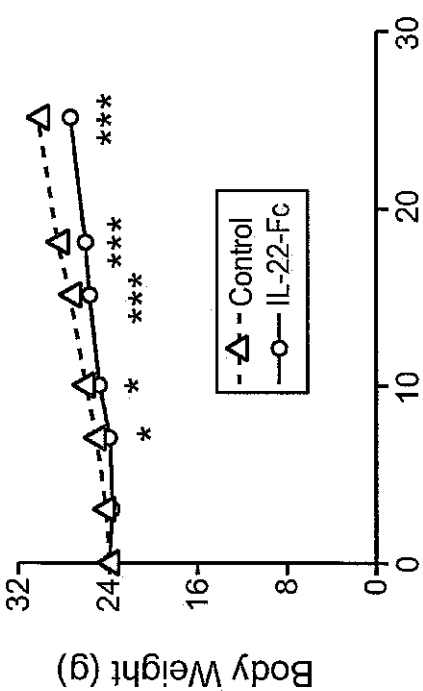


FIG. 48A

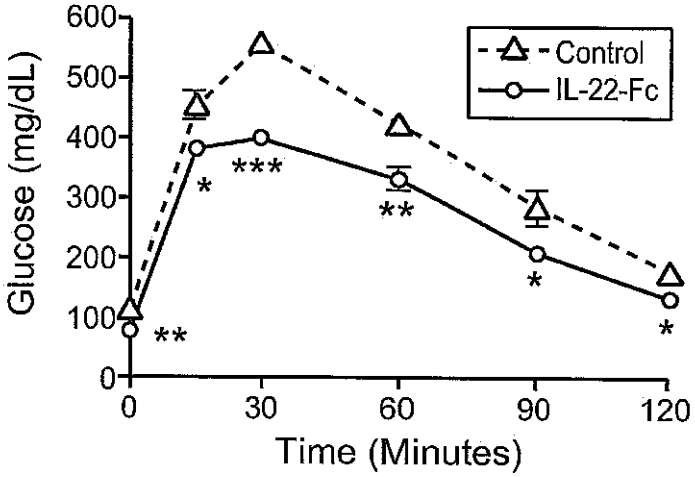


FIG. 48C

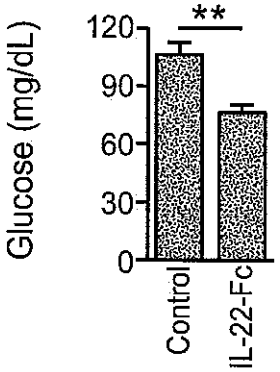


FIG. 48D

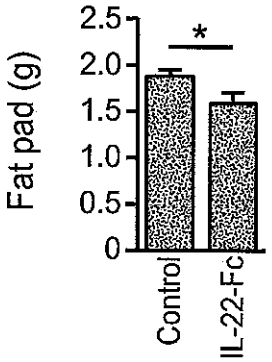


FIG. 48E

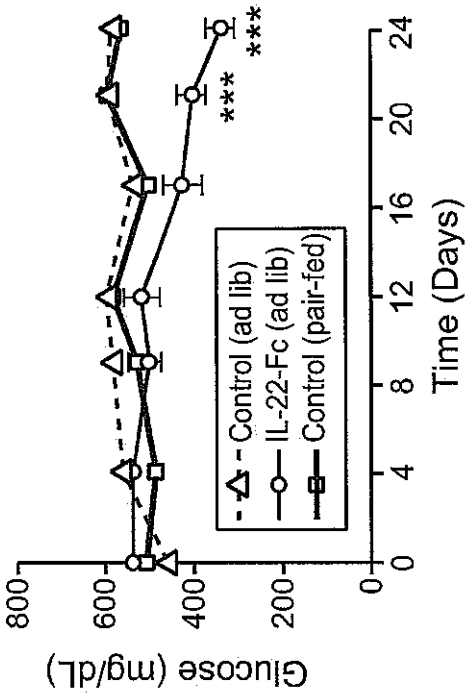


FIG. 49B

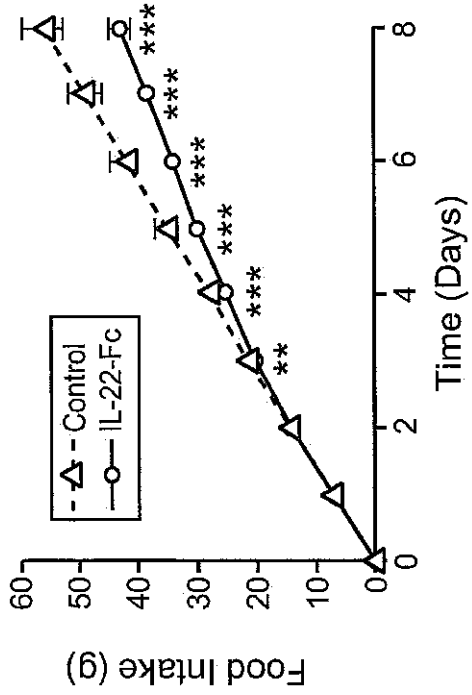


FIG. 49A

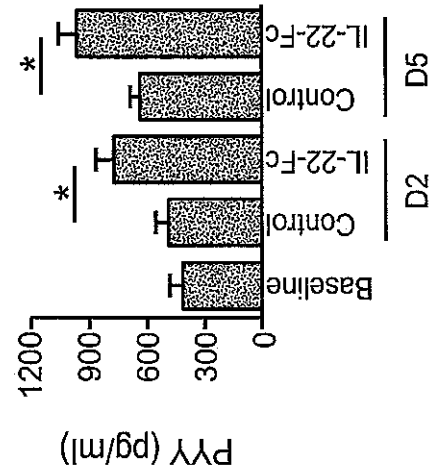


FIG. 49D

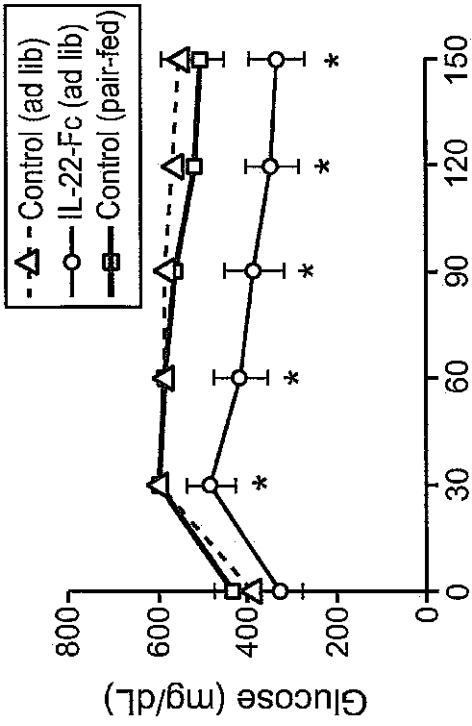


FIG. 49C

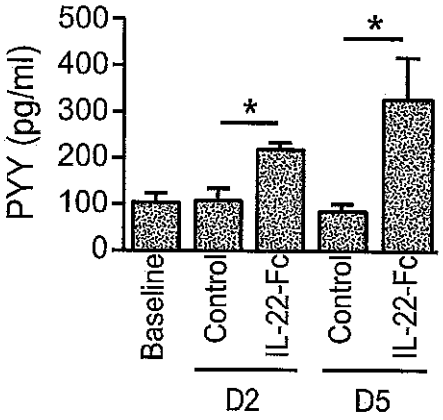


FIG. 49E

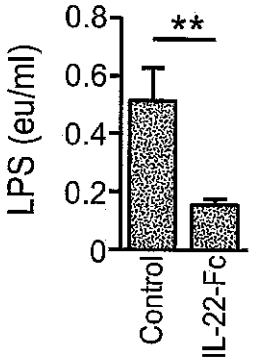


FIG. 49F

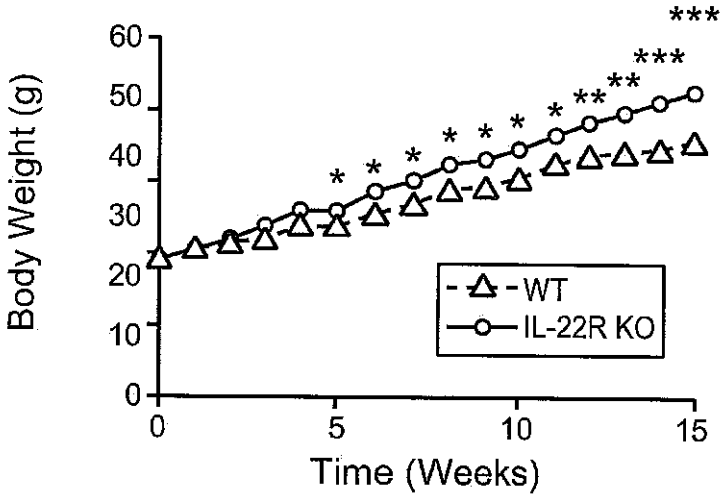


FIG. 49G

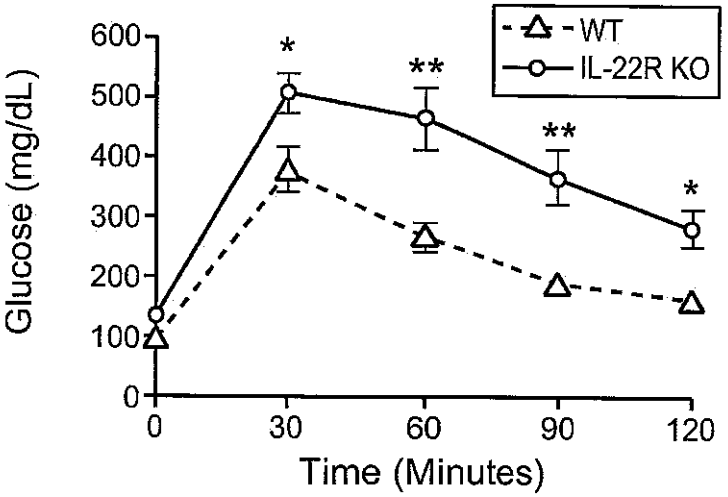


FIG. 49H

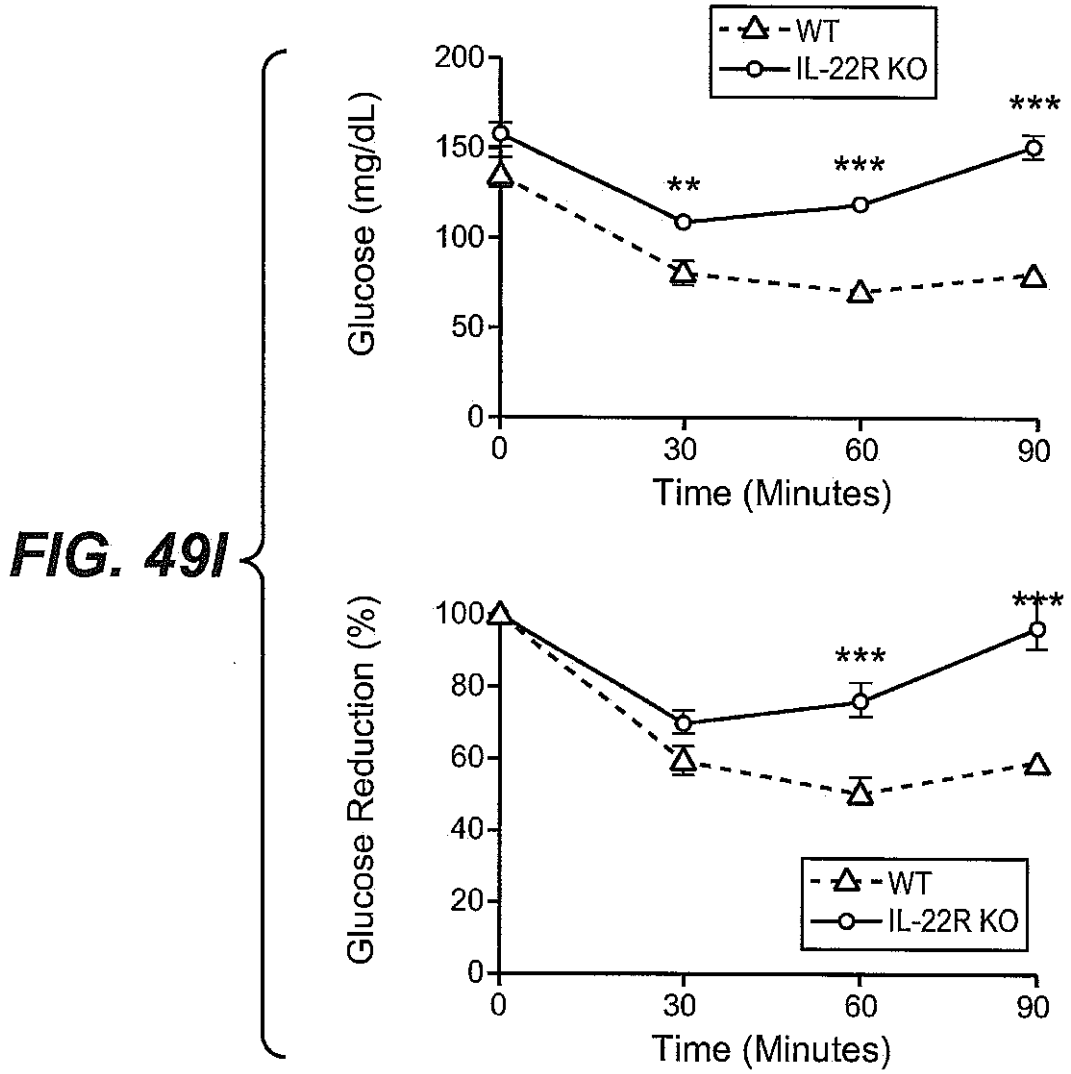


FIG. 49I

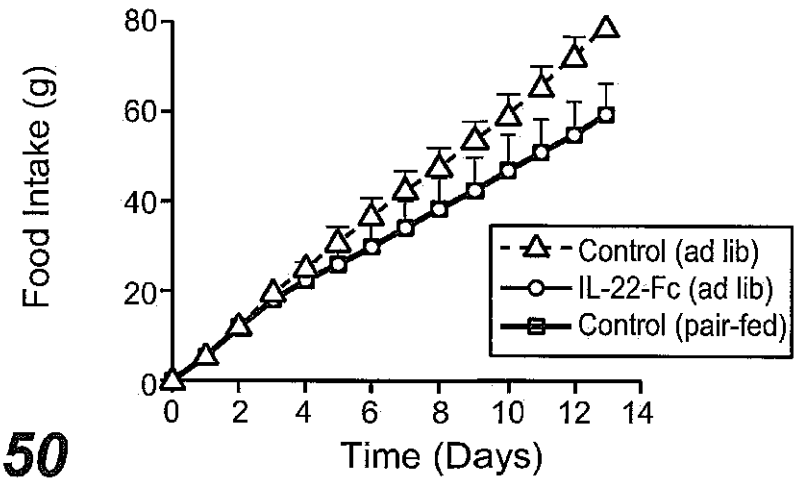


FIG. 50

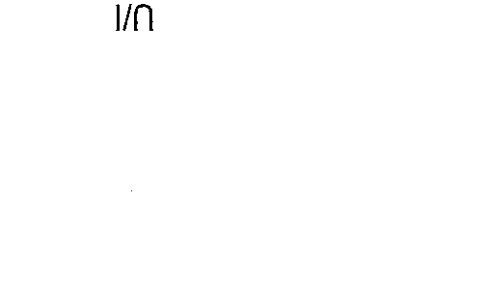


FIG. 51A

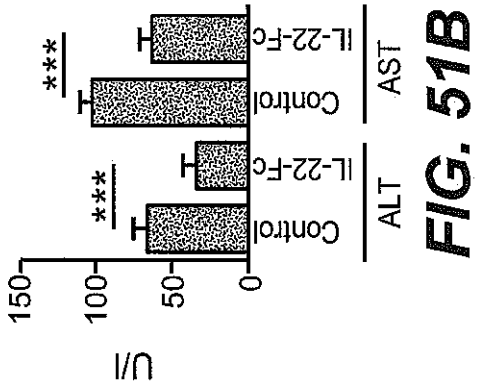


FIG. 51B

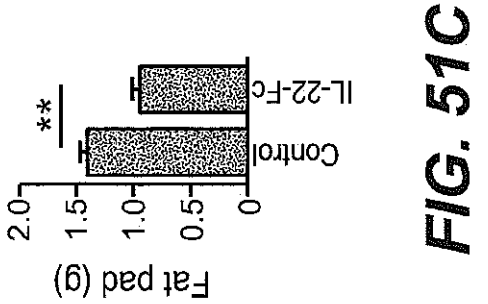


FIG. 51C

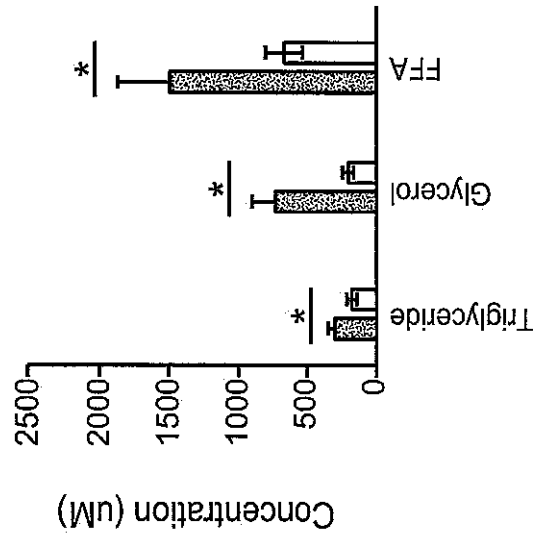


FIG. 51E

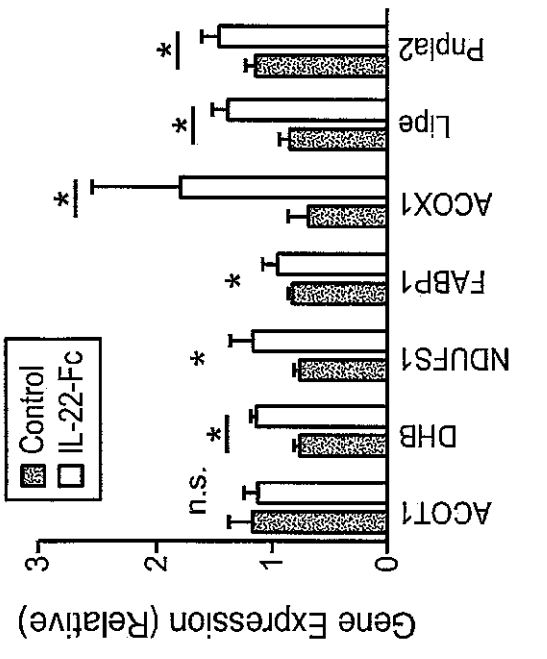


FIG. 51D

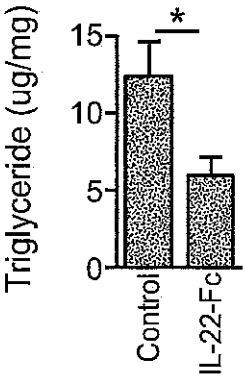


FIG. 51F

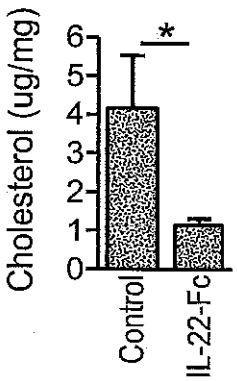


FIG. 51G

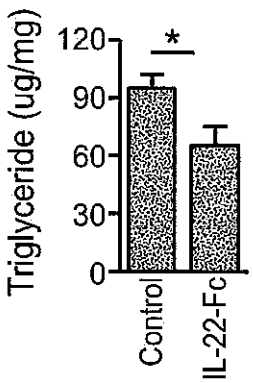


FIG. 51H

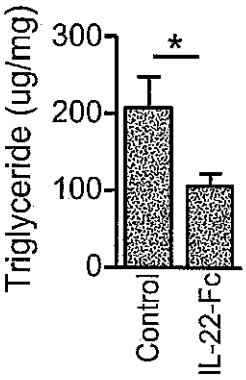


FIG. 51I

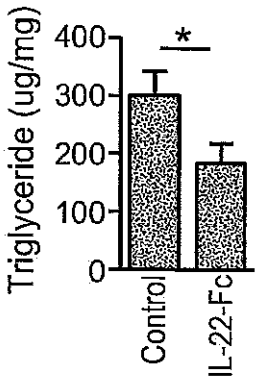


FIG. 51J

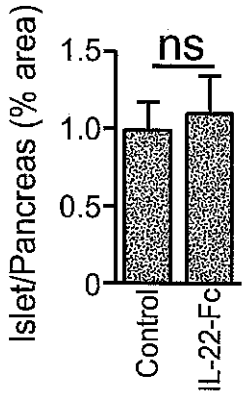


FIG. 52A

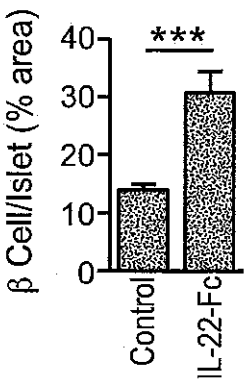


FIG. 52B

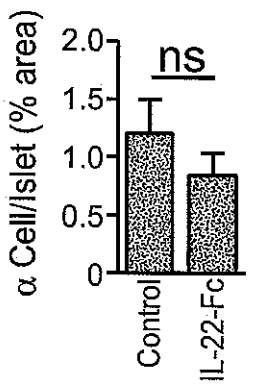


FIG. 52C

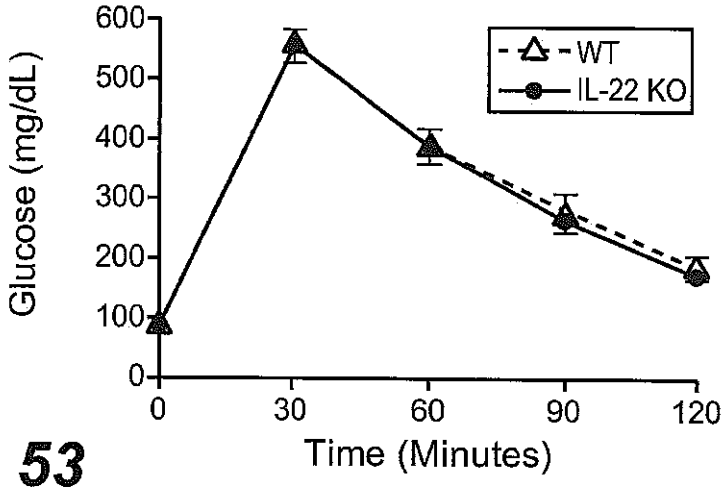


FIG. 53

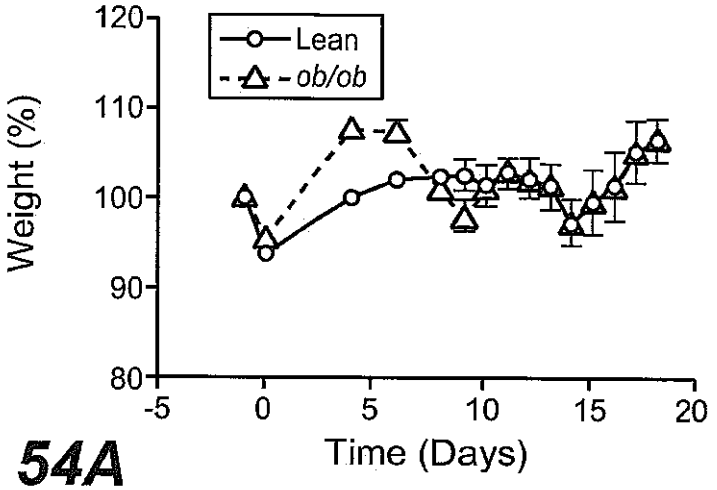


FIG. 54A

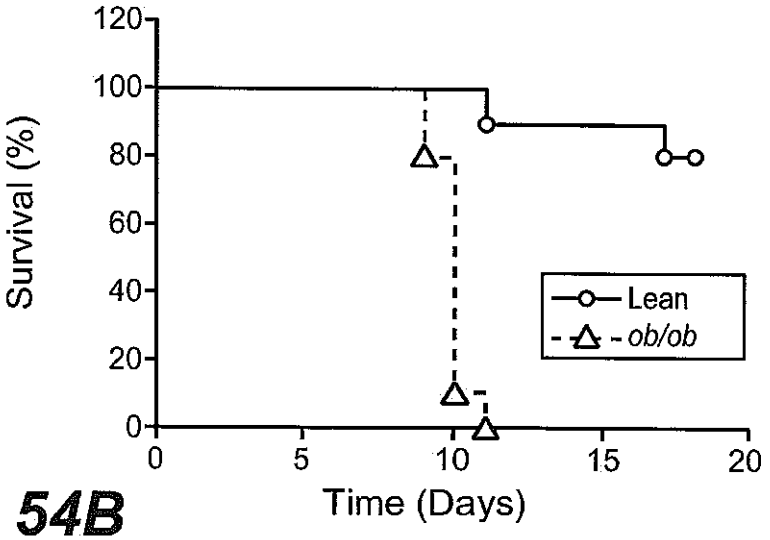


FIG. 54B

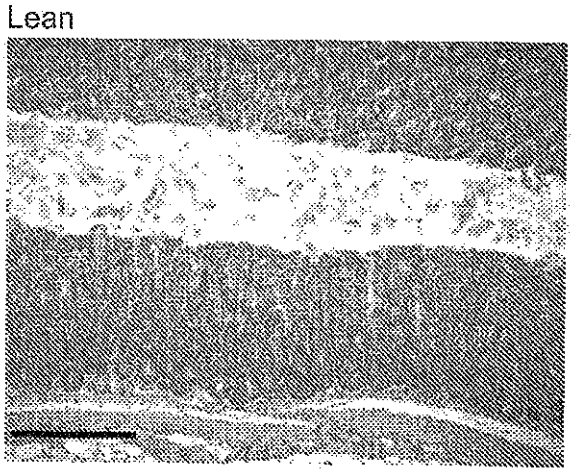


FIG. 54C

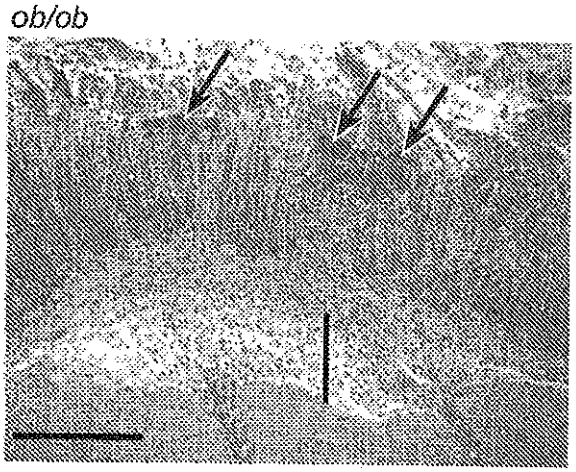


FIG. 54D

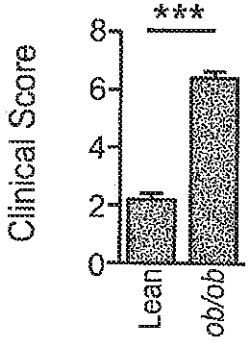


FIG. 54E

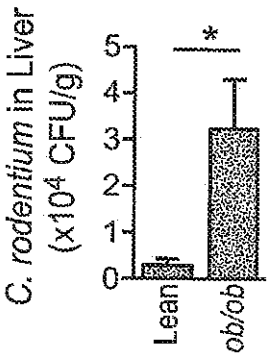


FIG. 54F

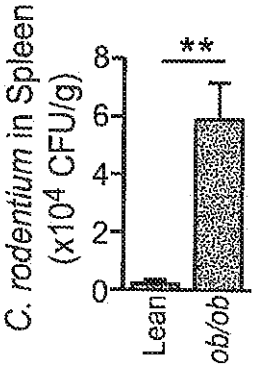


FIG. 54G

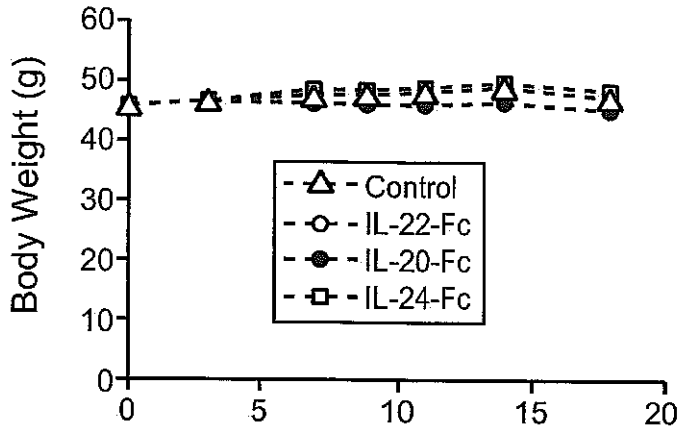


FIG. 55A

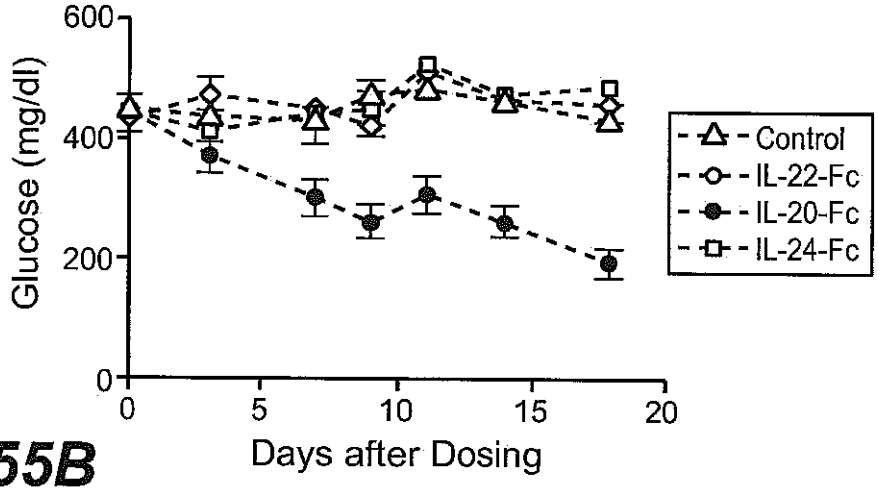


FIG. 55B

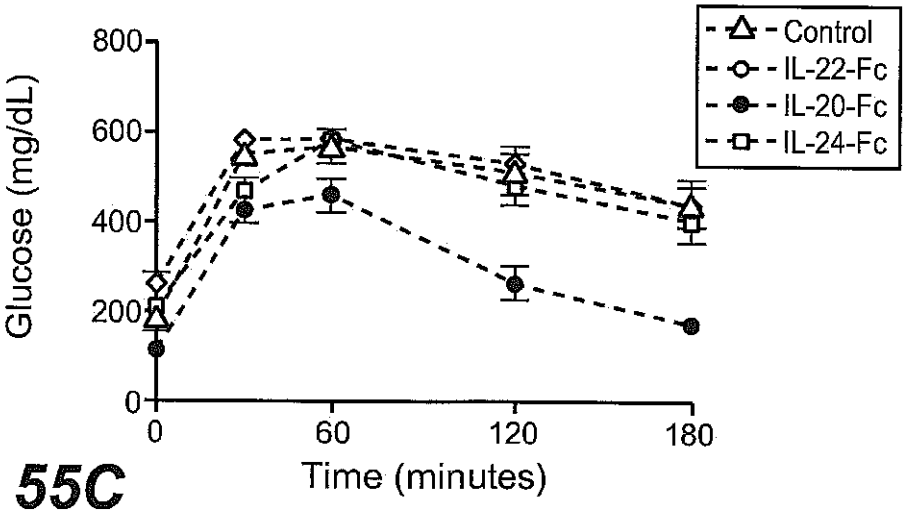


FIG. 55C

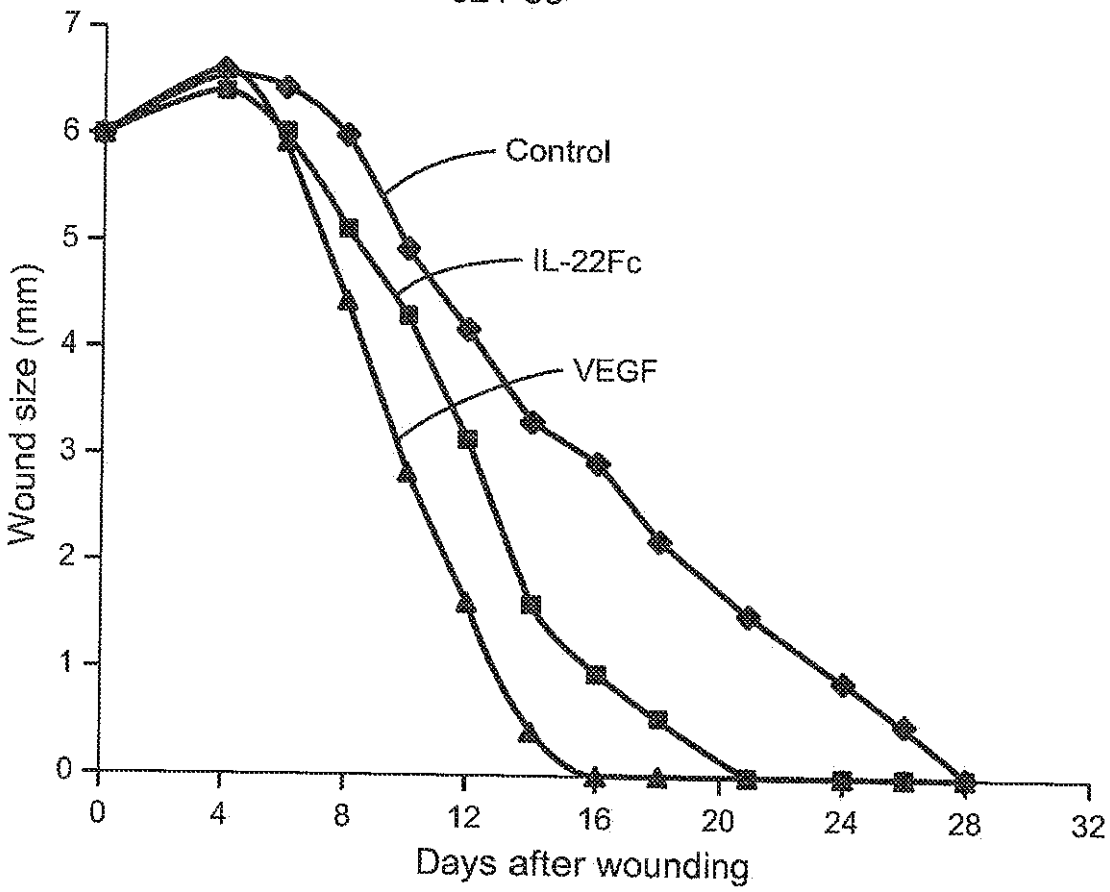


FIG. 56A

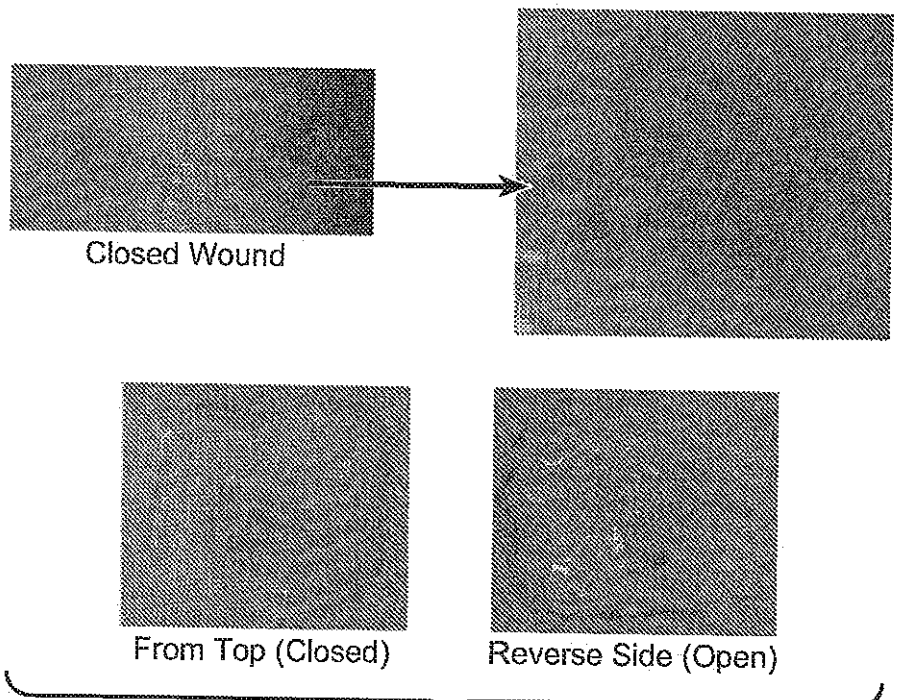


FIG. 56B

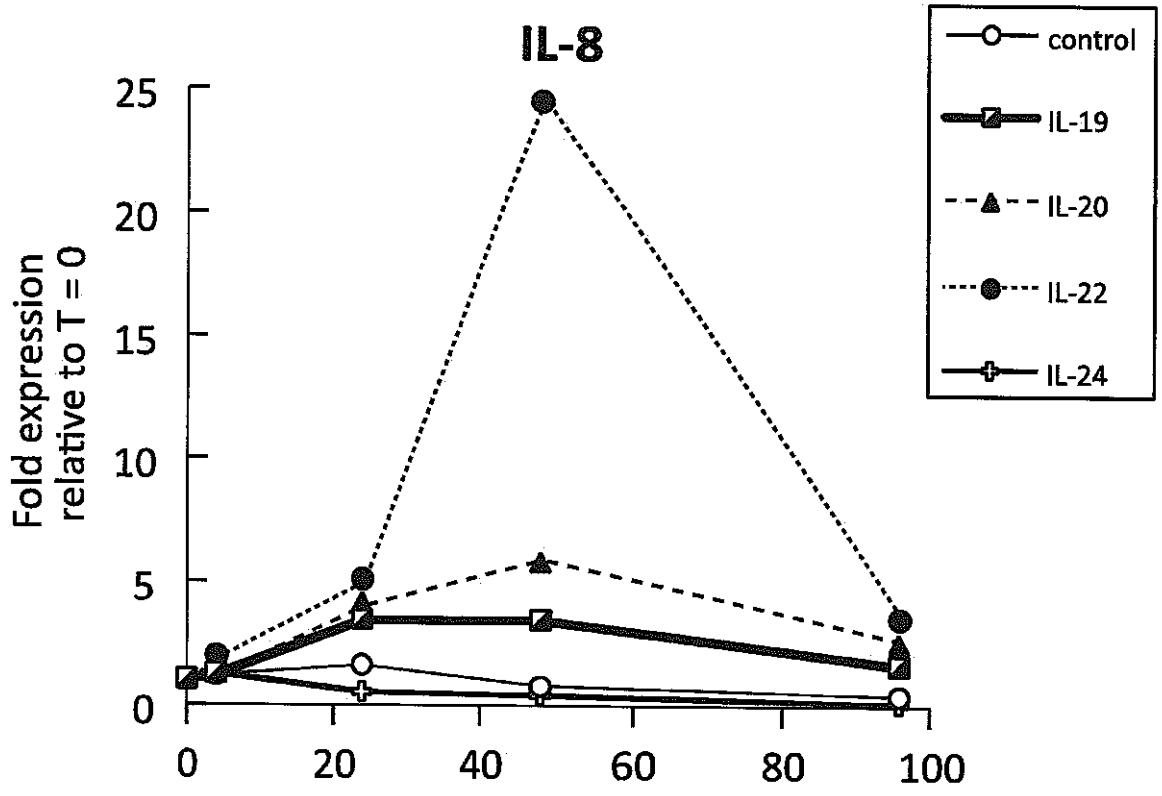


FIG. 57A

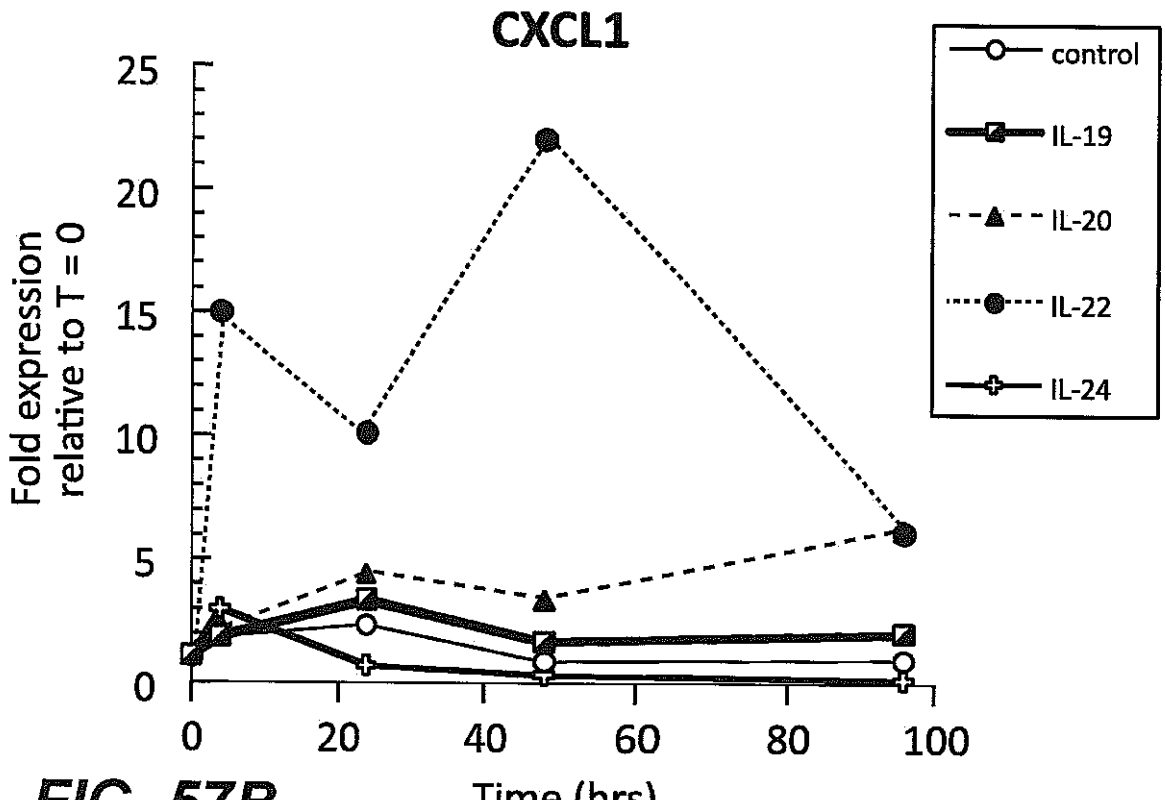


FIG. 57B

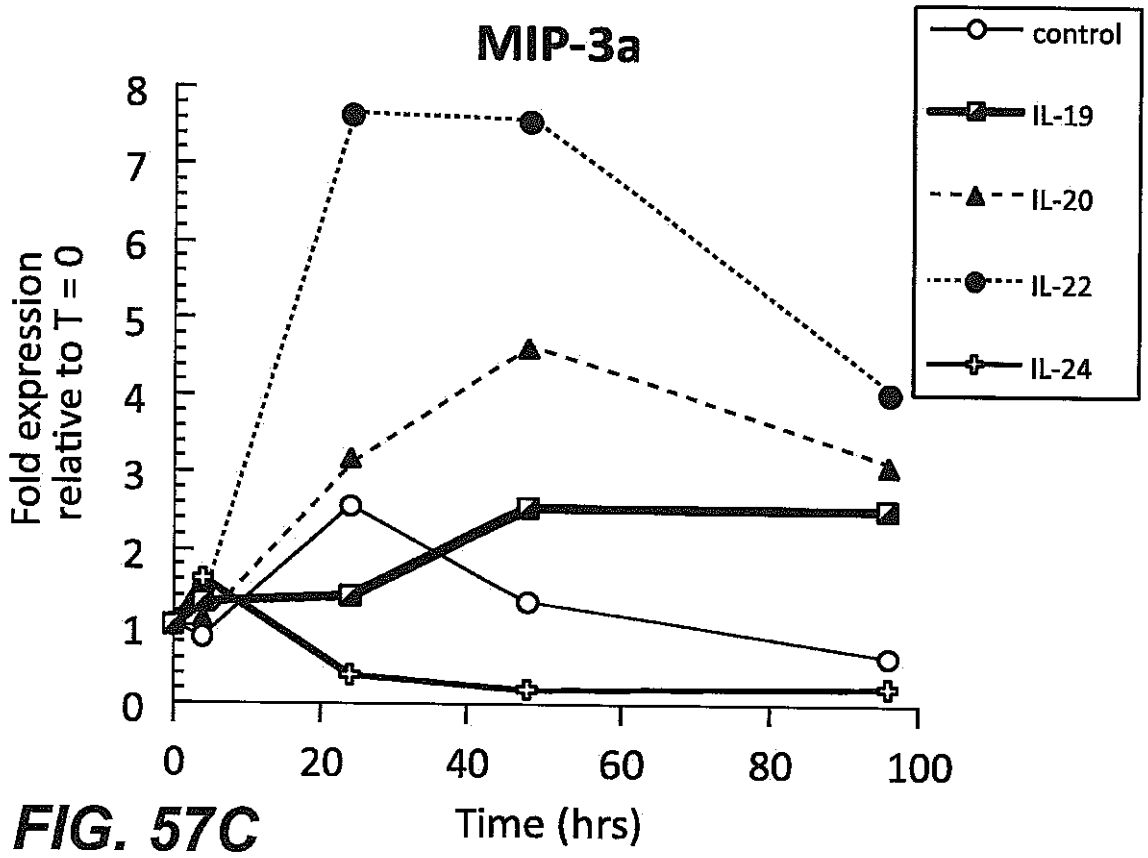


FIG. 57C

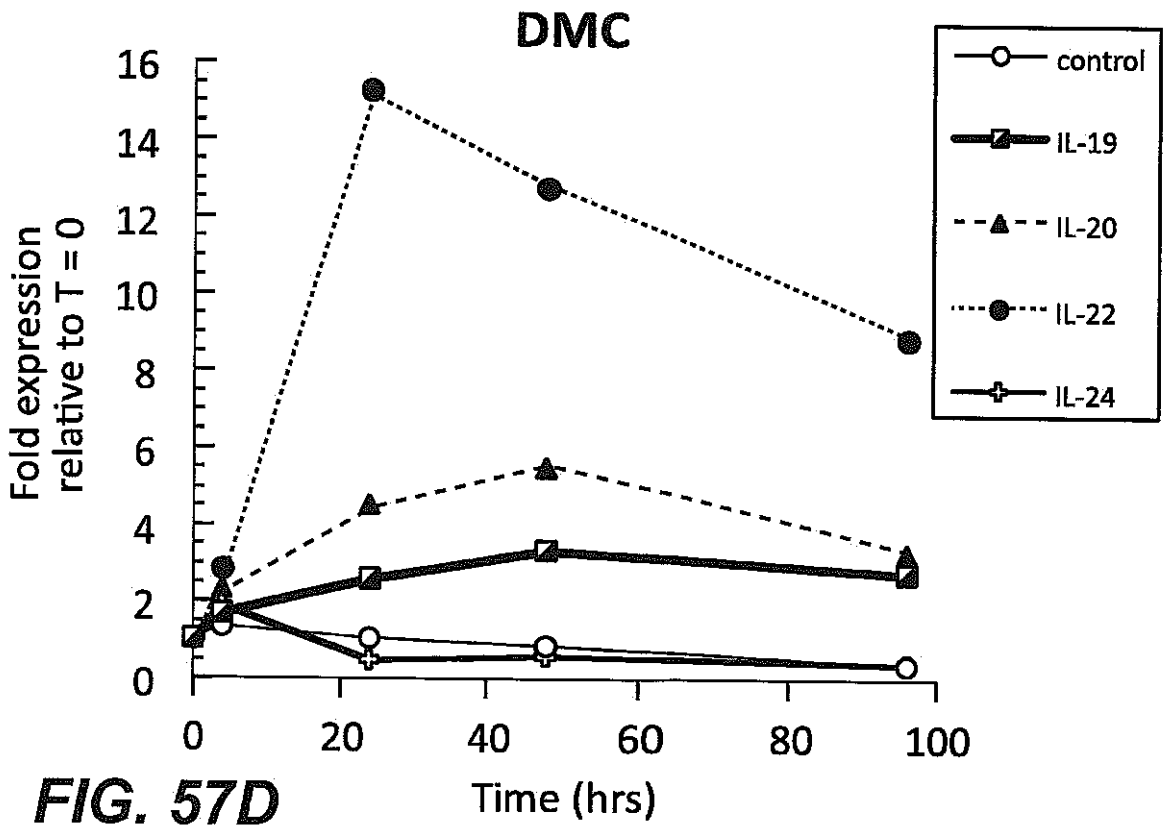


FIG. 57D

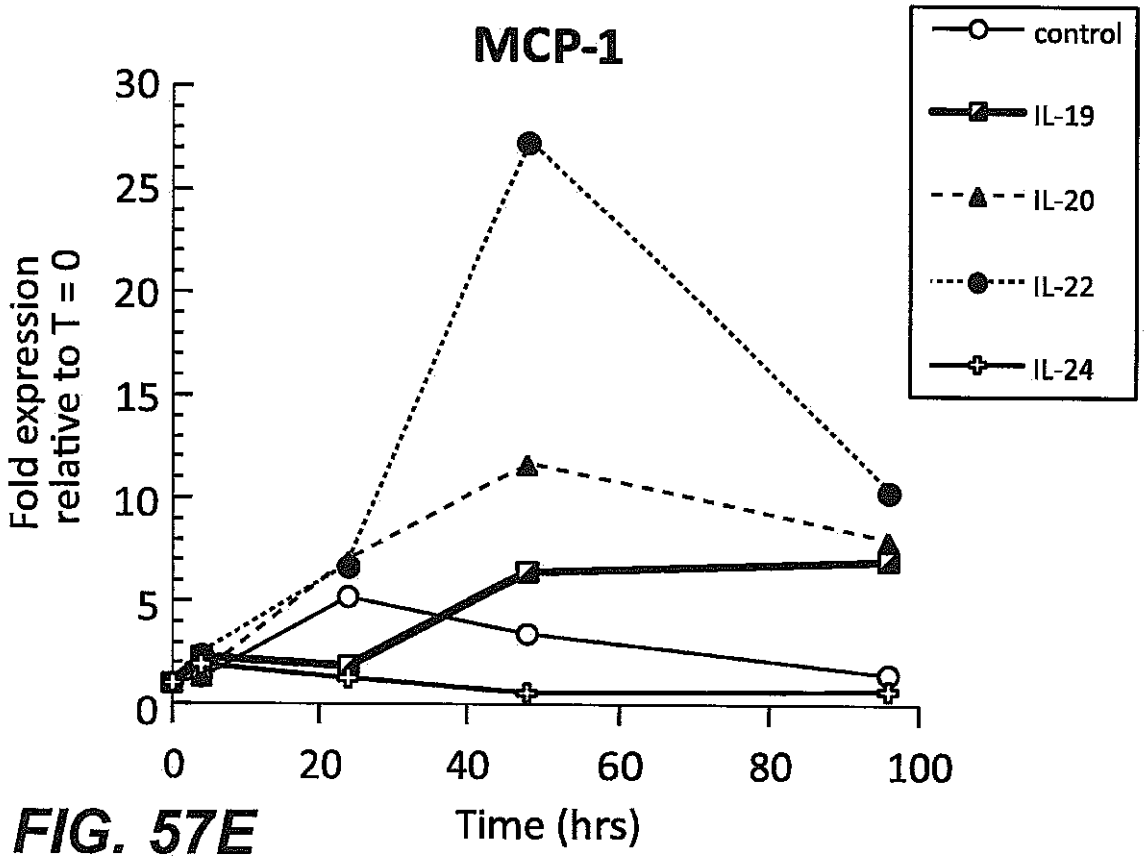


FIG. 57E

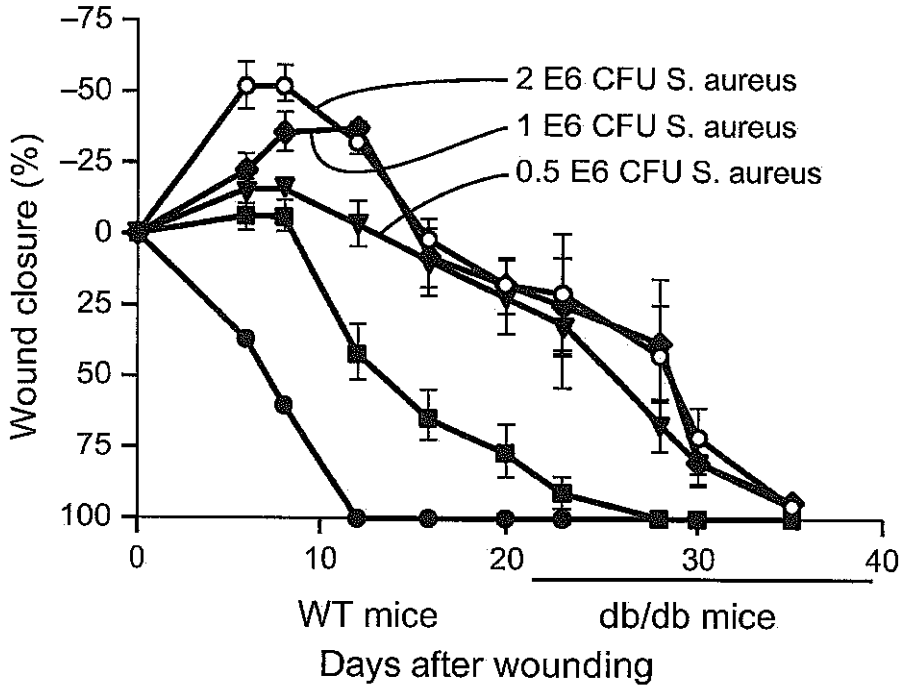


FIG. 58

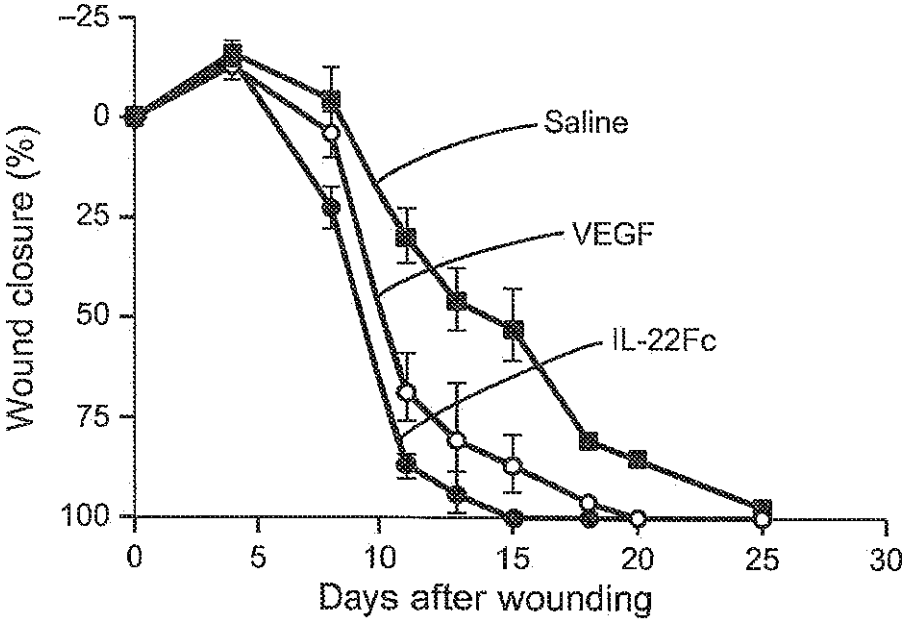


FIG. 59A

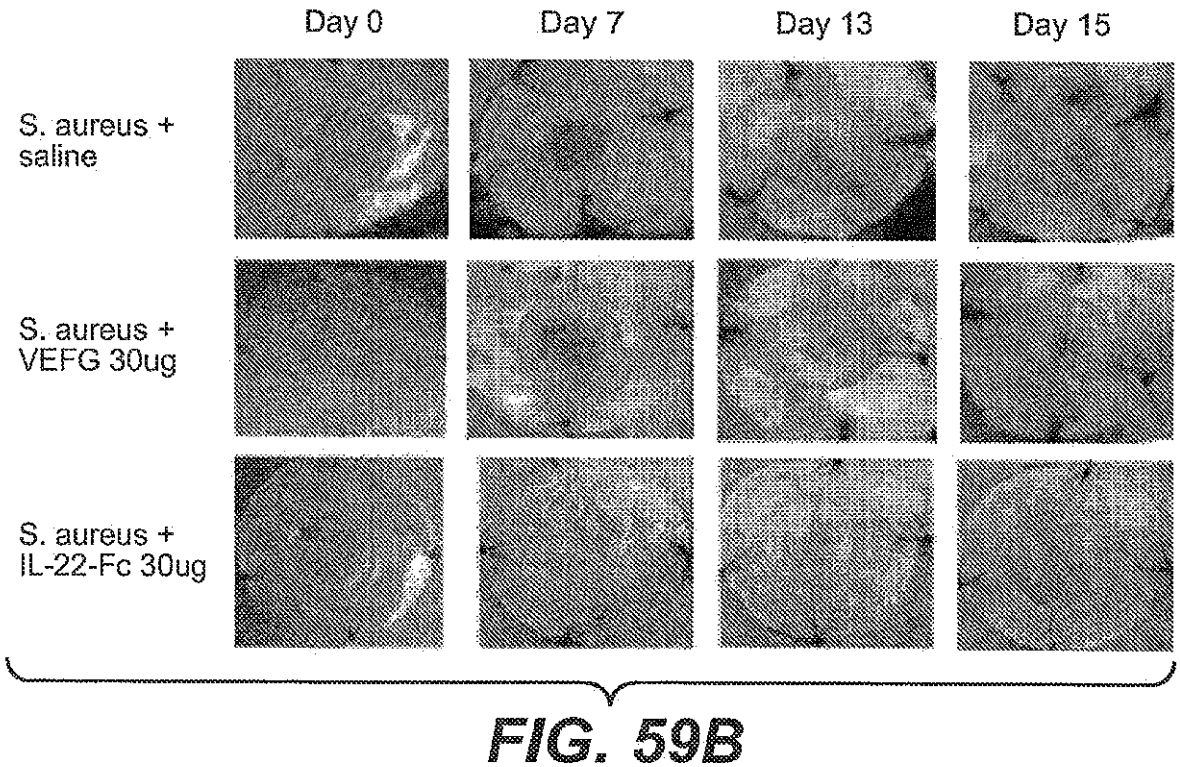


FIG. 59B

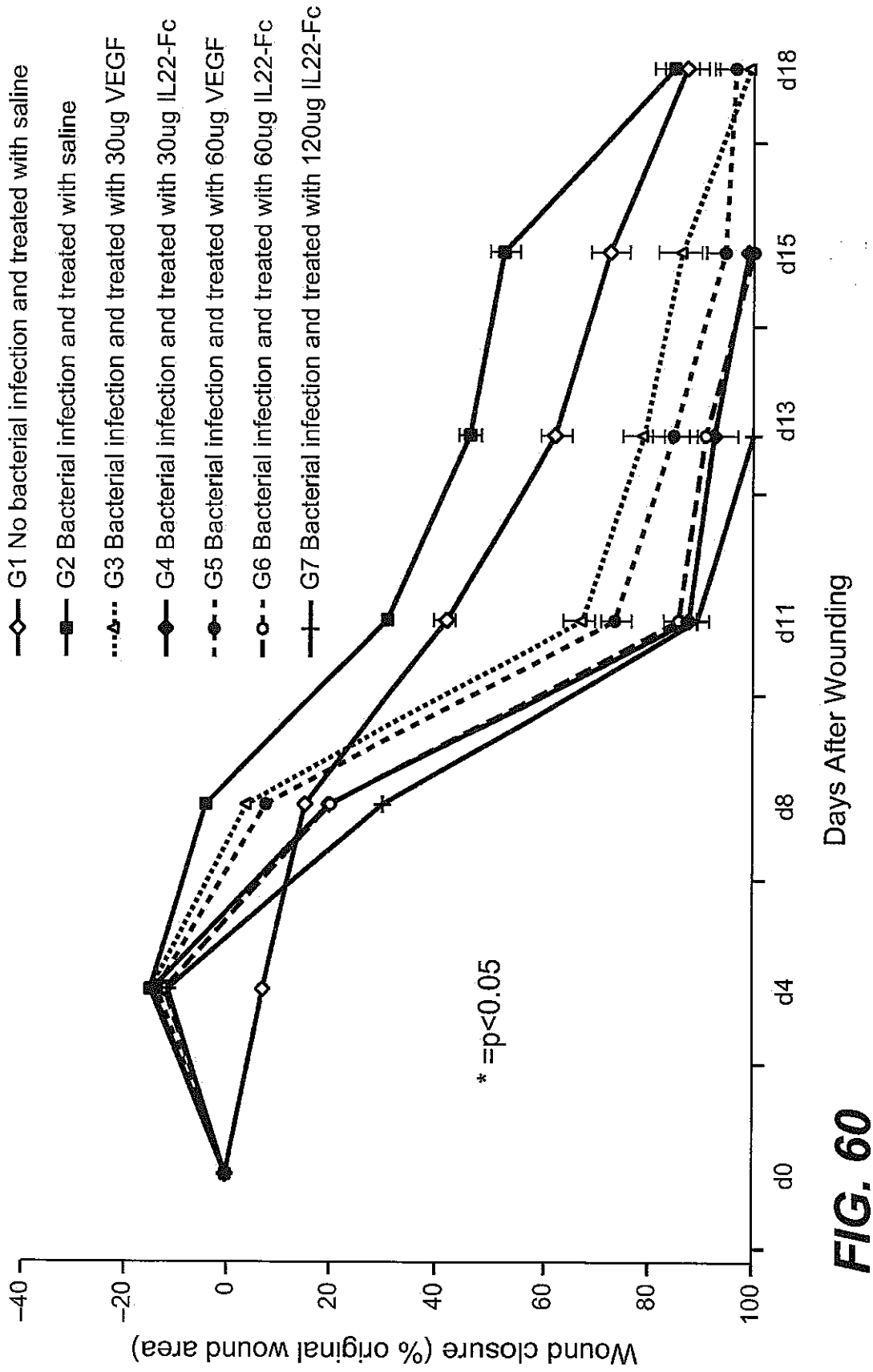

G1 No bacterial infection and treated with saline
G2 Bacterial infection and treated with saline
G3 Bacterial infection and treated with 30ug VEGF
G4 Bacterial infection and treated with 30ug IL22-Fc
G5 Bacterial infection and treated with 60ug VEGF
G6 Bacterial infection and treated with 60ug IL22-Fc
G7 Bacterial infection and treated with 120ug IL22-Fc
Wound closure (% original wound area)
-40
-20
0
20
40
60
80
100
d0
d4
d8
d11
d13
d15
d18
Days After Wounding
* =p<0.05

FIG. 60

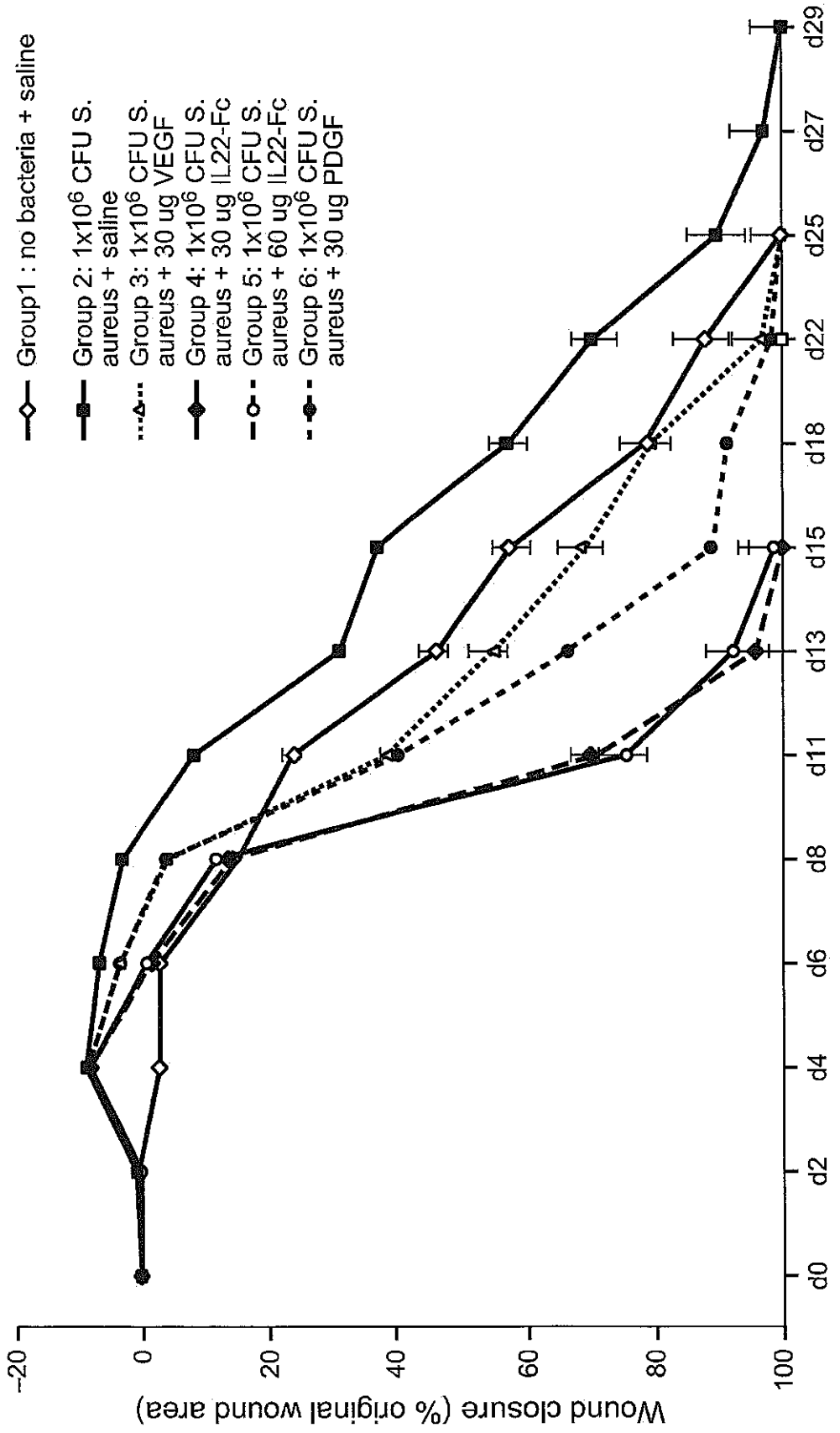

Group1 : no bacteria + saline
Group 2: 1x10^6 CFU S. aureus + saline
Group 3: 1x10^6 CFU S. aureus + 30 ug VEGF
Group 4: 1x10^6 CFU S. aureus + 30 ug IL22-Fc
Group 5: 1x10^6 CFU S. aureus + 60 ug IL22-Fc
Group 6: 1x10^6 CFU S. aureus + 30 ug PDGF
Wound closure (% original wound area)
-20
0
20
40
60
80
100
d0
d2
d4
d6
d8
d11
d13
d15
d18
d22
d25
d27
d29
Days After Wounding

FIG. 61

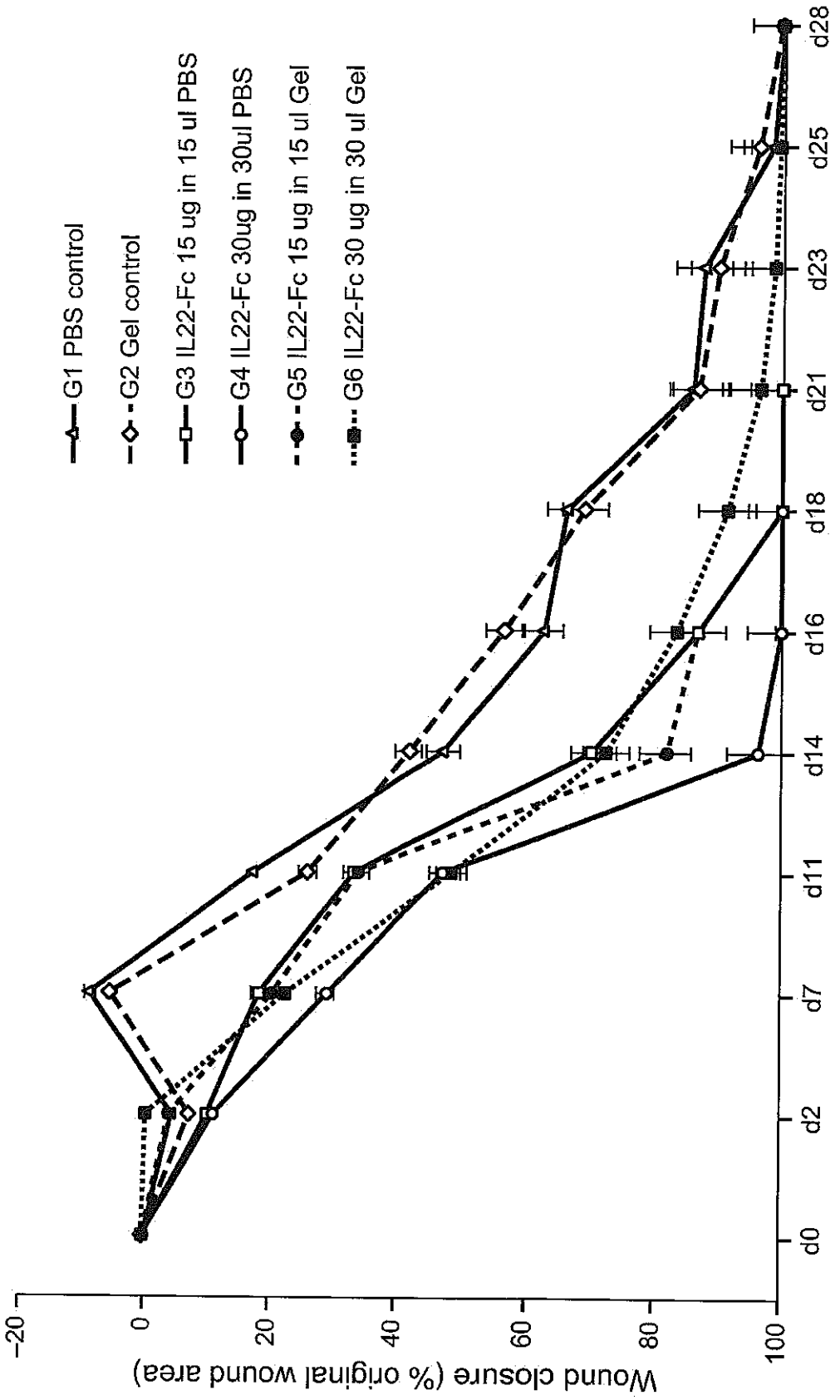

G1 PBS control
G2 Gel control
G3 IL22-Fc 15 ug in 15 ul PBS
G4 IL22-Fc 30ug in 30ul PBS
G5 IL22-Fc 15 ug in 15 ul Gel
G6 IL22-Fc 30 ug in 30 ul Gel
Wound closure (% original wound area)
−20
0
20
40
60
80
100
d0
d2
d7
d11
d14
d16
d18
d21
d23
d25
d28
Days After Wounding

FIG. 62