Figure 1A

Human CSF-1R sequence: SEQ ID NO: 1

```
        10         20         30         40         50         60
MGPGVLLLLL VATAWHGQGI PVIEPSVPEL VVKPGATVTL RCVGNGSVEW DGPPSPHWTL
        70         80         90        100        110        120
YSDGSSSILS TNNATFQNTG TYRCTEPGDP LGGSAAIHLY VKDPARPWNV LAQEVVVFED
       130        140        150        160        170        180
QDALLPCLLT DPVLEAGVSL VRVRGRPLMR HTNYSFSPWH GFTIHRAKFI QSQDYQCSAL
       190        200        210        220        230        240
MGGRKVMSIS IRLKVQKVIP GPPALTLVPA ELVRIRGEAA QIVCSASSVD VNFDVFLQHN
       250        260        270        280        290        300
NTKLAIPQQS DFHNNRYQKV LTLNLDQVDF QHAGNYSCVA SNVQGKHSTS MFFRVVESAY
       310        320        330        340        350        360
LNLSSEQNLI QEVTVGEGLN LKVMVEAYPG LQGFNWTYLG PFSDHQPEPK LANATTKDTY
       370        380        390        400        410        420
RHTFTLSLPR LKPSEAGRYS FLARNPGGWR ALTFELTLRY PPEVSVIWTF INGSGTLLCA
       430        440        450        460        470        480
ASGYPQPNVT WLQCSGHTDR CDEAQVLQVW DDPYPEVLSQ EPFHKVTVQS LLTVETLEHN
       490        500        510        520        530        540
QTYECRAHNS VGSGSWAFIP ISAGAHTHPP DEFLFTPVVV ACMSIMALLL LLLLLLLYKY
       550        560        570        580        590        600
KQKPKYQVRW KIIESYEGNS YTFIDPTQLP YNEKWEFPRN NLQFGKTLGA GAFGKVVEAT
       610        620        630        640        650        660
AFGLGKEDAV LKVAVKMLKS TAHADEKEAL MSELKIMSHL GQHENIVNLL GACTHGGPVL
       670        680        690        700        710        720
VITEYCCYGD LLNFLRRKAE AMLGPSLSPG QDPEGGVDYK NIHLEKKYVR RDSGFSSQGV
       730        740        750        760        770        780
DTYVEMRPVS TSSNDSFSEQ DLDKEDGRPL ELRDLLHFSS QVAQGMAFLA SKNCIHRDVA
       790        800        810        820        830        840
ARNVLLTNGH VAKIGDFGLA RDIMNDSNYI VKGNARLPVK WMAPESIFDC VYTVQSDVWS
       850        860        870        880        890        900
YGILLWEIFS LGLNPYPGIL VNSKFYKLVK DGYQMAQPAF APKNIYSIMQ ACWALEPTHR
       910        920        930        940        950        960
PTFQQICSFL QEQAQEDRRE RDYTNLPSSS RSGGSGSSSS ELEEESSSEH LTCCEQGDIA
       970
QPLLQPNNYQ FC
```

Figure 1B

Amino acid sequence for CSF-1R SEQ ID NO: 2

IPVIEPSVPELVVKPGATVTLRCVGNGSVEWDGPPSPHWTLYSDGSSSILSTNNATFQNTGTYR
CTEPGDPLGGSAAIHLYVKDPARPWNVLAQEVVVFEDQDALLPCLLTDPVLEAGVSLVRVRGRP
LMRHTNYSFSPWHGFTIHRAKFIQSQDYQCSALMGGRKVMSISIRLKVQKVIPGPPALTLVPAE
LVRIRGEAAQIVCSASSVDVNFDVFLQHNNTKLAIPQQSDFHNNRYQKVLTLNLDQVDFQHAGN
YSCVASNVQGKHSTSMFFRVV

Amino acid sequence for CSF-1R (ENSP00000421174 49 amino acids) SEQ ID NO: 3

MRHTNYSFSPWHGFTIHRAKFIQSQDYQCSALMGGRKVMSISIRLKVQK

Amino acid sequence for CSF-1R SEQ ID NO: 4 (SNP V32G, A245S, H247P, V279M, position underlined)

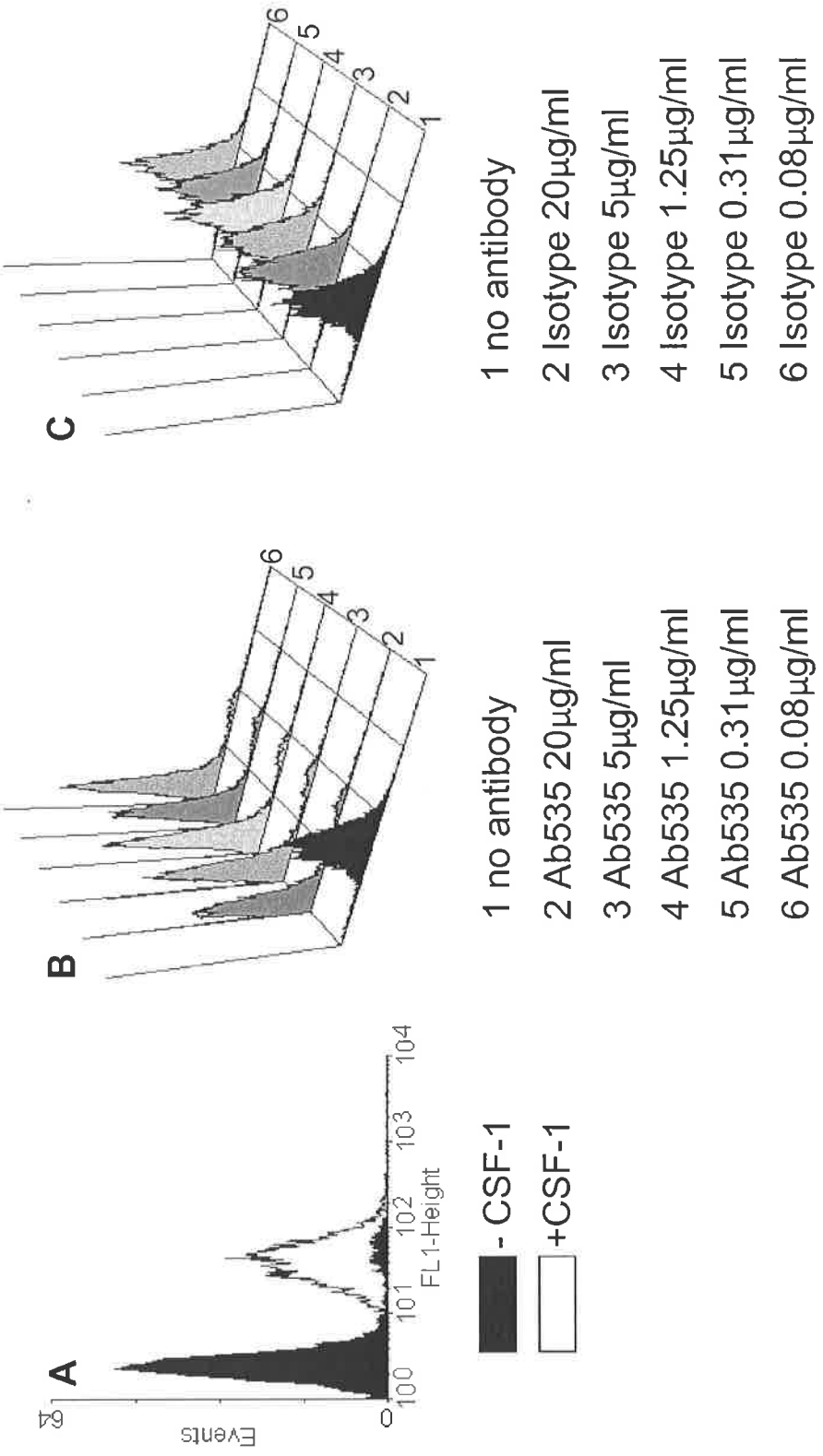
IPVIEPSVPELV**V**KPGATVTLRCVGNGSVEWDGPPSPHWTLYSDGSSSILSTNNATFQNTGTYR
CTEPGDPLGGSAAIHLYVKDPARPWNVLAQEVVVFEDQDALLPCLLTDPVLEAGVSLVRVRGRP
LMRHTNYSFSPWHGFTIHRAKFIQSQDYQCSALMGGRKVMSISIRLKVQKVIPGPPALTLVPAE
LVRIRGEAAQIVCSASSVDVNFDVFLQHNNTKL**A**I**H**QQSDFHNNRYQKVLTLNLDQVDFQHAGN
YSC**V**ASNVQGKHSTSMFFRVVESAYLNLSSEQNLIQEVTVGEGLNLKVMVEAYPGLQGFNWTYL
GPFSDHQPEPKLANATTKDTYRHTFTLSLPRLKPSEAGRYSFLARNPGGWRALTFELTLRYPPE
VSVIWTFINGSGTLLCAASGYPQPNVTWLQCSGHTDRCDEAQVLQVWDDPYPEVLSQEPFHKVT
VQSLLTVETLEHNQTYECRAHNSVGSGSWAFIPISAGAHTHPPDE

Figure 1C

CSF-1R form suitable for expression on a cell surface SEQ ID NO: 5

MGPGVLLLLL VATAWHGQGI PVIEPSVPEL VVKPGATVTL RCVGNGSVEW DGPPSPHWTL YSDGSSSILS
TNNATFQNTG TYRCTEPGDP LGGSAAIHLY VKDPARPWNV LAQEVVVFED QDALLPCLLT DPVLEAGVSL
VRVRGRPLMR HTNYSFSPWH GFTIHRAKFI QSQDYQCSAL MGGRKVMSIS IRLKVQKVIP GPPALTLVPA
ELVRIRGEAA QIVCSASSVD VNFDVFLQHN NTKLAIPQQS DFHNNRYQKV LTLNLDQVDF QHAGNYSCVA
SNVQGKHSTS MFFRVVESAY LNLSSEQNLI QEVTVGEGLN LKVMVEAYPG LQGFNWTYLG PFSDHQPEPK
LANATTKDTY RHTFTLSLPR LKPSEAGRYS FLARNPGGWR ALTFELTLRY PPEVSVIWTF INGSGTLLCA
ASGYPQPNVT WLQCSGHTDR CDEAQVLQVW DDPYPEVLSQ EPFHKVTVQS LLTVETLEHN QTYECRAHNS
VGSGSWAFIP ISAGAHTHPP DE

Figure 2


A
B
C
Events
64
0
100
10 1
10 2
10 3
10 4
FL1-Height
- CSF-1
+CSF-1
1 no antibody
2 Ab535 20µg/ml
3 Ab535 5µg/ml
4 Ab535 1.25µg/ml
5 Ab535 0.31µg/ml
6 Ab535 0.08µg/ml
1 no antibody
2 Isotype 20µg/ml
3 Isotype 5µg/ml
4 Isotype 1.25µg/ml
5 Isotype 0.31µg/ml
6 Isotype 0.08µg/ml

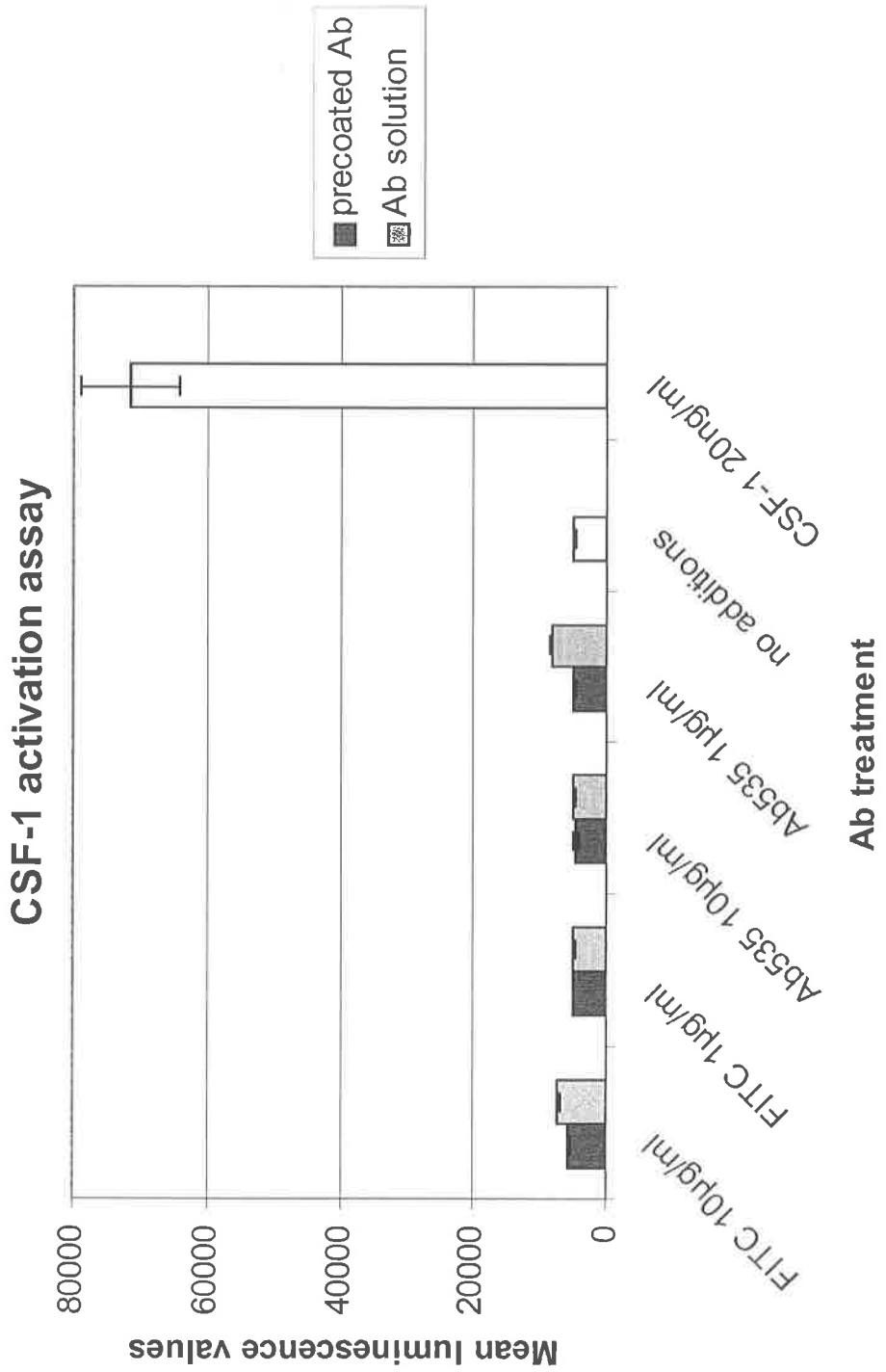

CSF-1 activation assay
precoated Ab
Ab solution
Mean luminescence values
80000
60000
40000
20000
0
FITC 10µg/ml
FITC 1µg/ml
Ab535 10µg/ml
Ab535 1µg/ml
no additions
CSF-1 20ng/ml
Ab treatment

FIGURE 3

Figure 4a

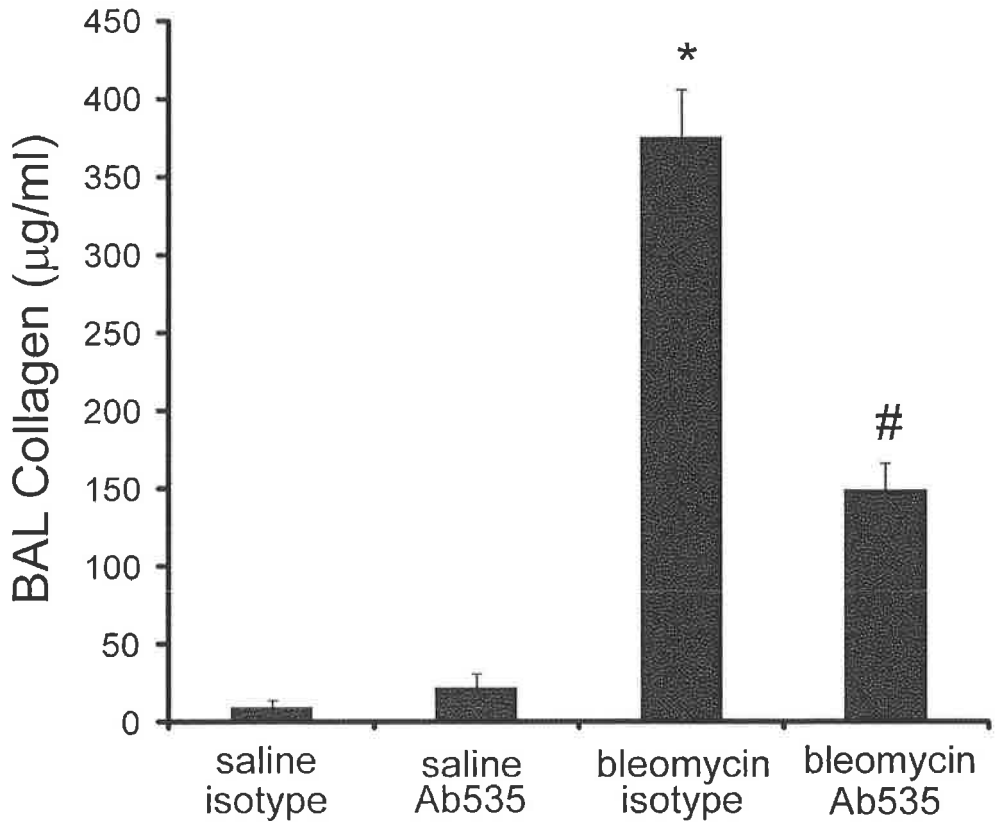

BAL Collagen (µg/ml)
450
400
350
300
250
200
150
100
50
0
*
#
saline isotype
saline Ab535
bleomycin isotype
bleomycin Ab535

Figure 4b

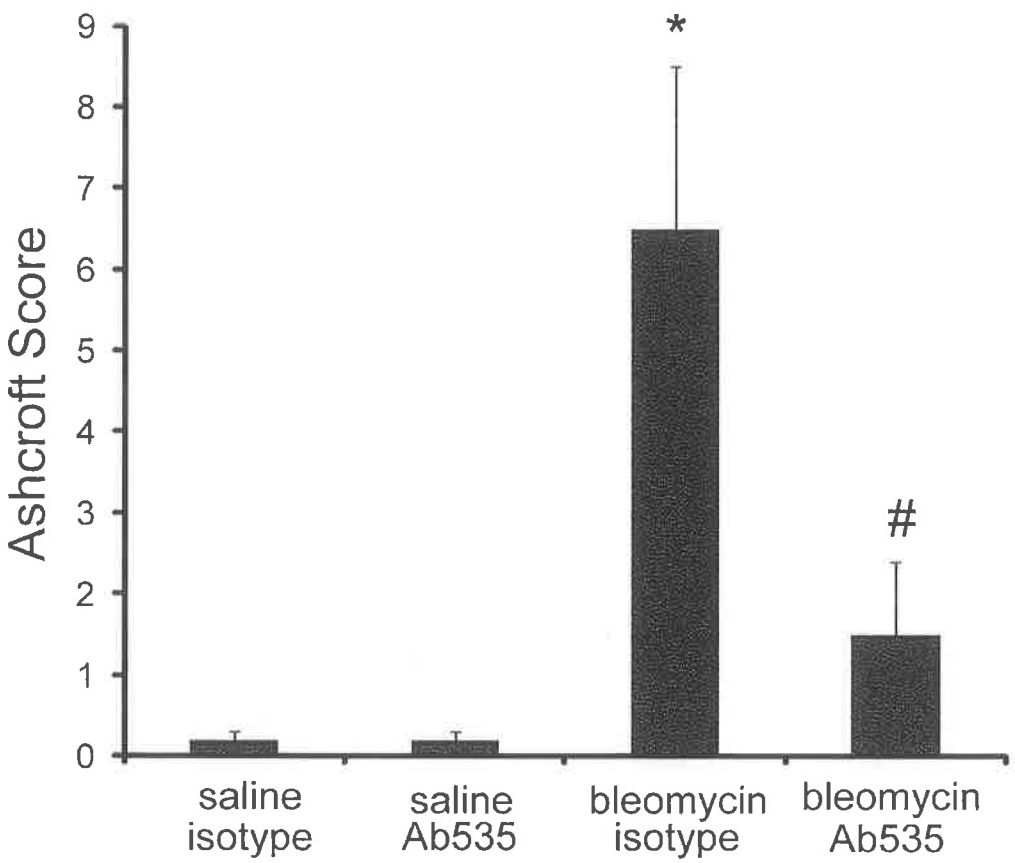

Ashcroft Score
9
8
7
6
5
4
3
2
1
0
*
#
saline isotype
saline Ab535
bleomycin isotype
bleomycin Ab535

Figure 4c

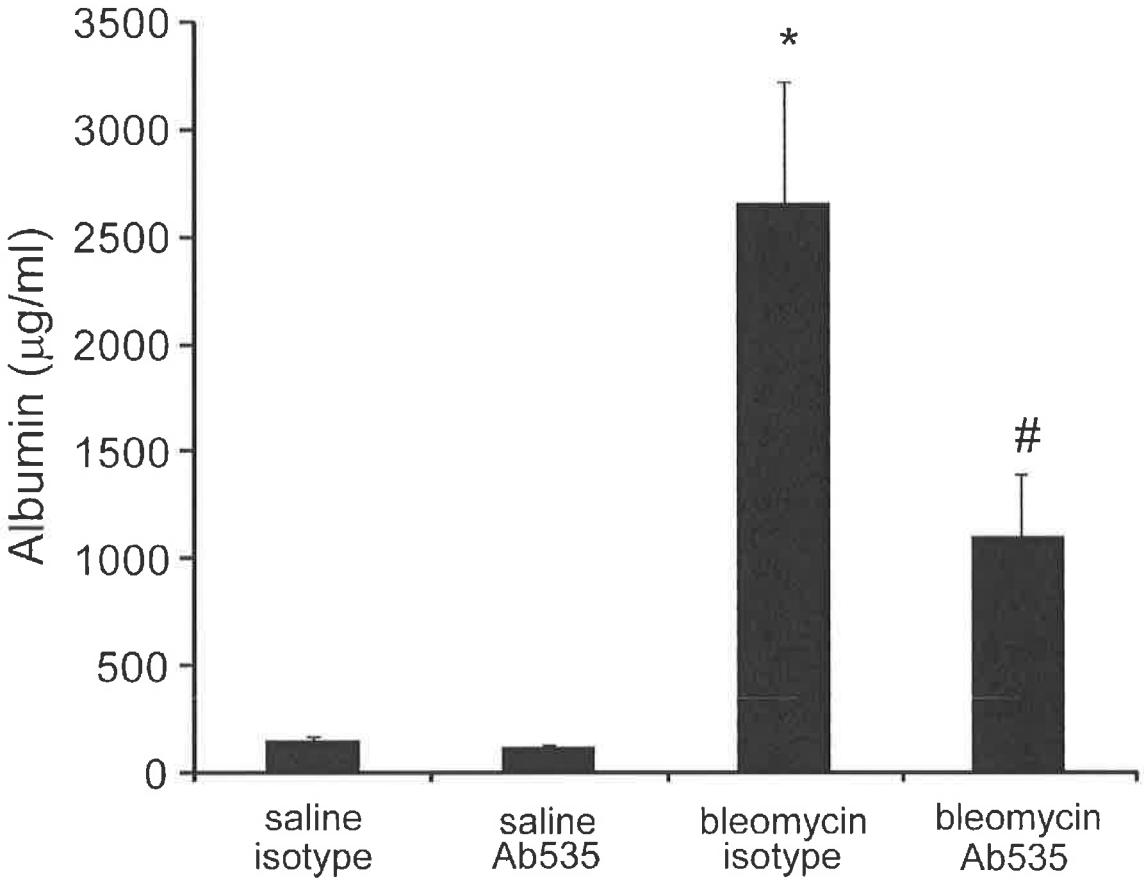
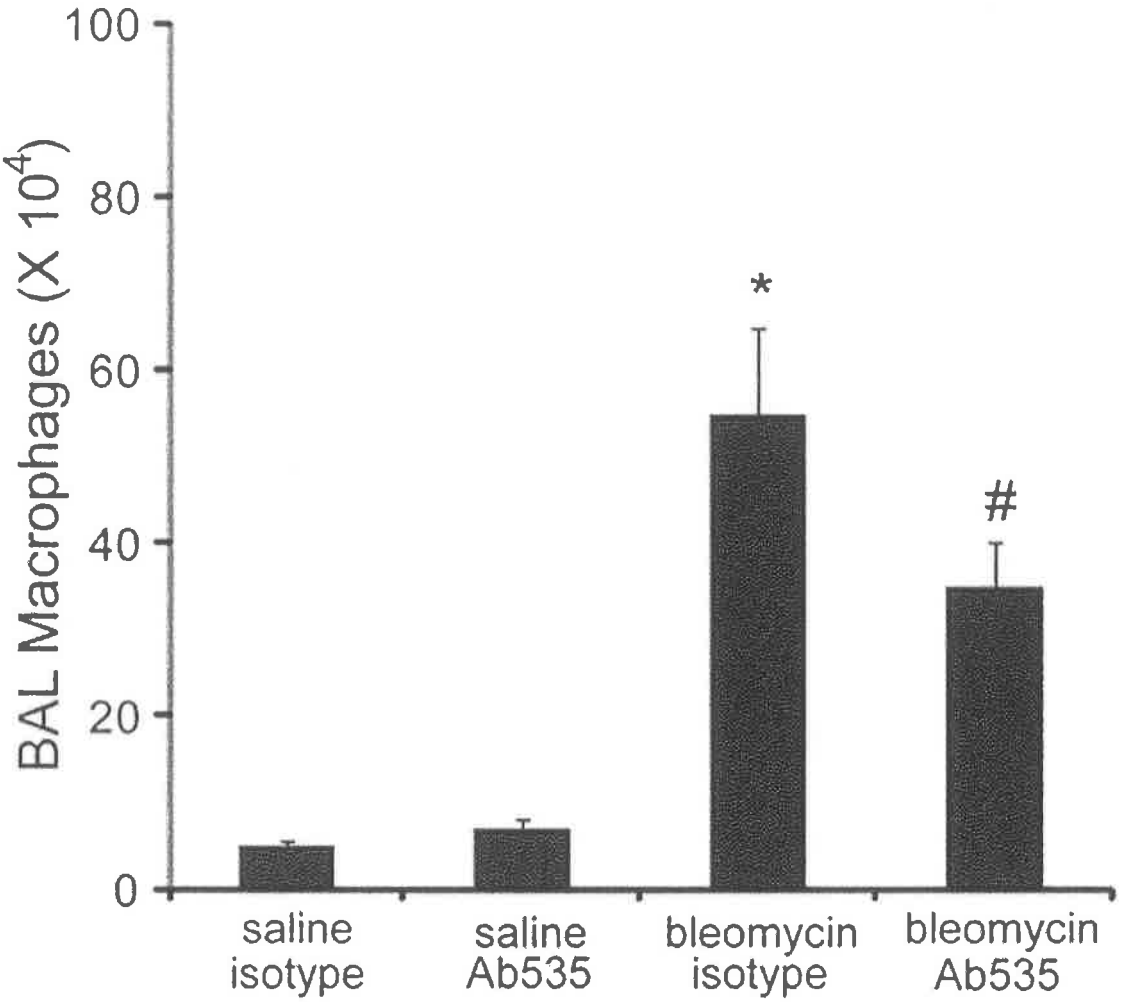

3500
3000
2500
2000
1500
1000
500
0
Albumin (µg/ml)
*
#
saline isotype
saline Ab535
bleomycin isotype
bleomycin Ab535

Fig 4d:


100
80
60
40
20
0
BAL Macrophages (X 10^4)
*
#
saline isotype
saline Ab535
bleomycin isotype
bleomycin Ab535

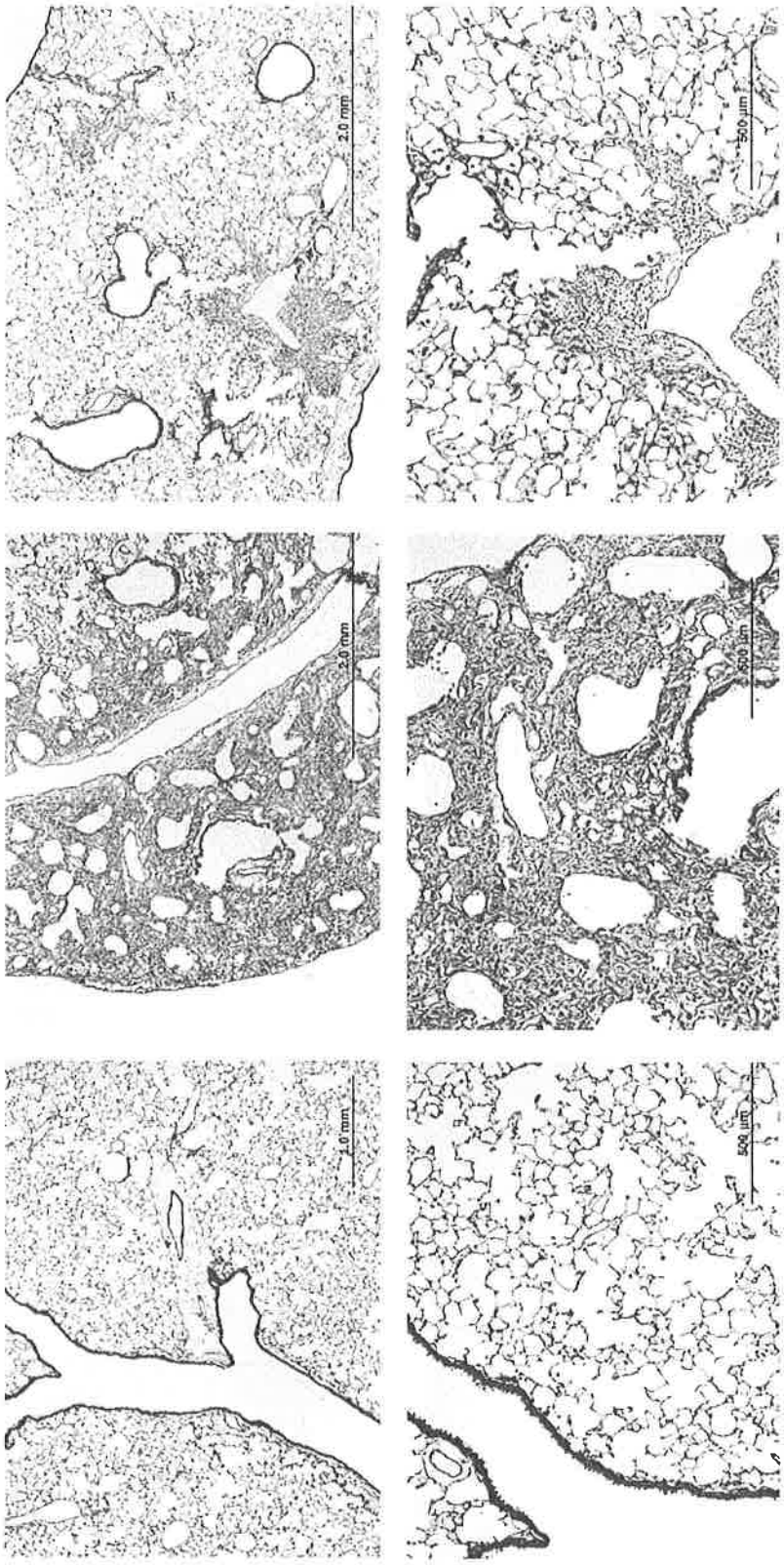

Saline + isotype control Ab
Bleomycin + isotype control Ab
Bleomycin + Ab535
2.0 mm
500 µm

Figure 5

Figure 6a

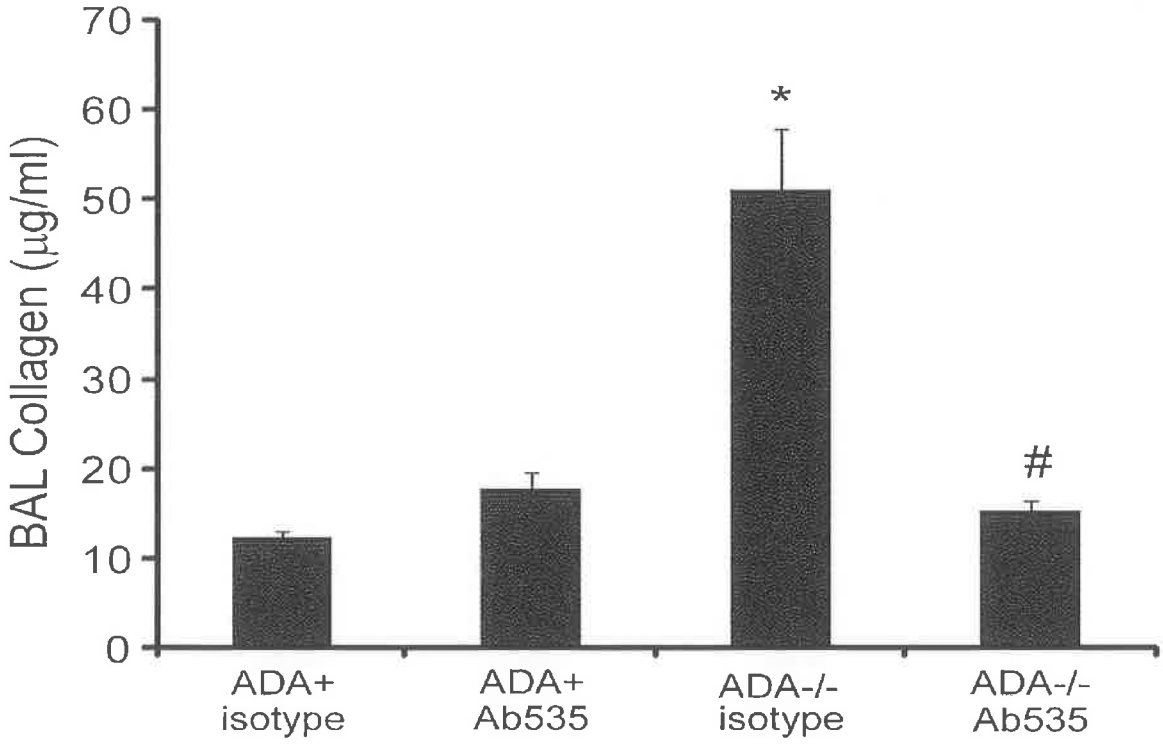

70
60
50
40
30
20
10
0
BAL Collagen (µg/ml)
*
#
ADA+ isotype
ADA+ Ab535
ADA-/- isotype
ADA-/- Ab535

Figure 6b

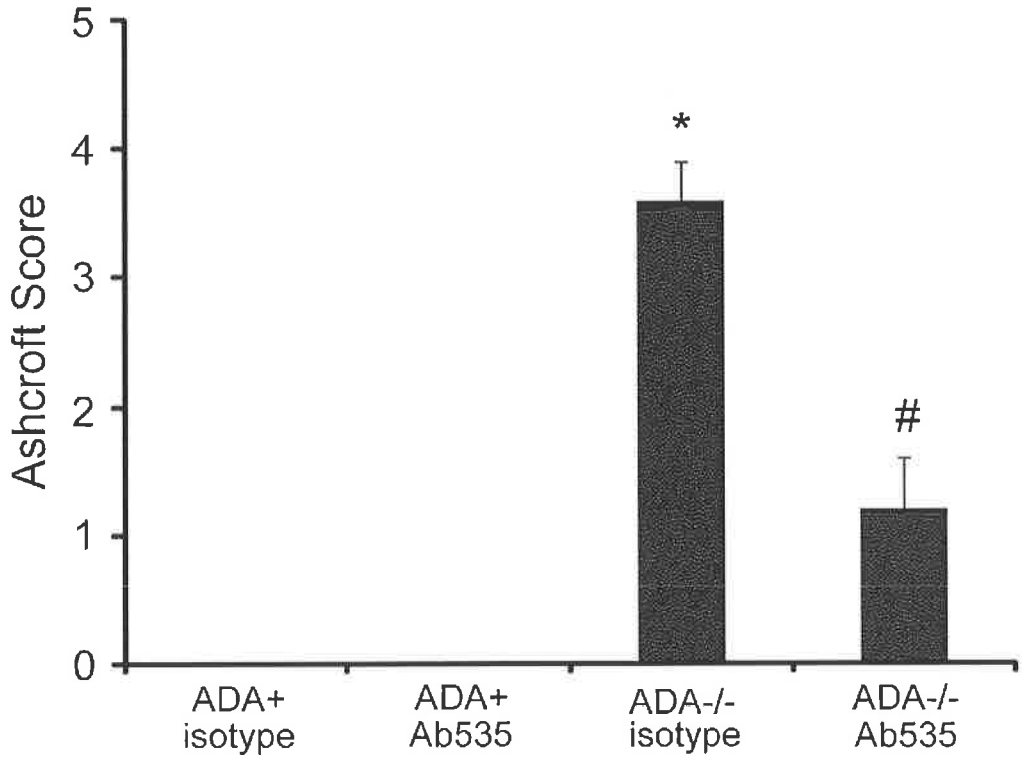

Ashcroft Score
5
4
3
2
1
0
*
#
ADA+ isotype
ADA+ Ab535
ADA-/- isotype
ADA-/- Ab535

Figure 6c

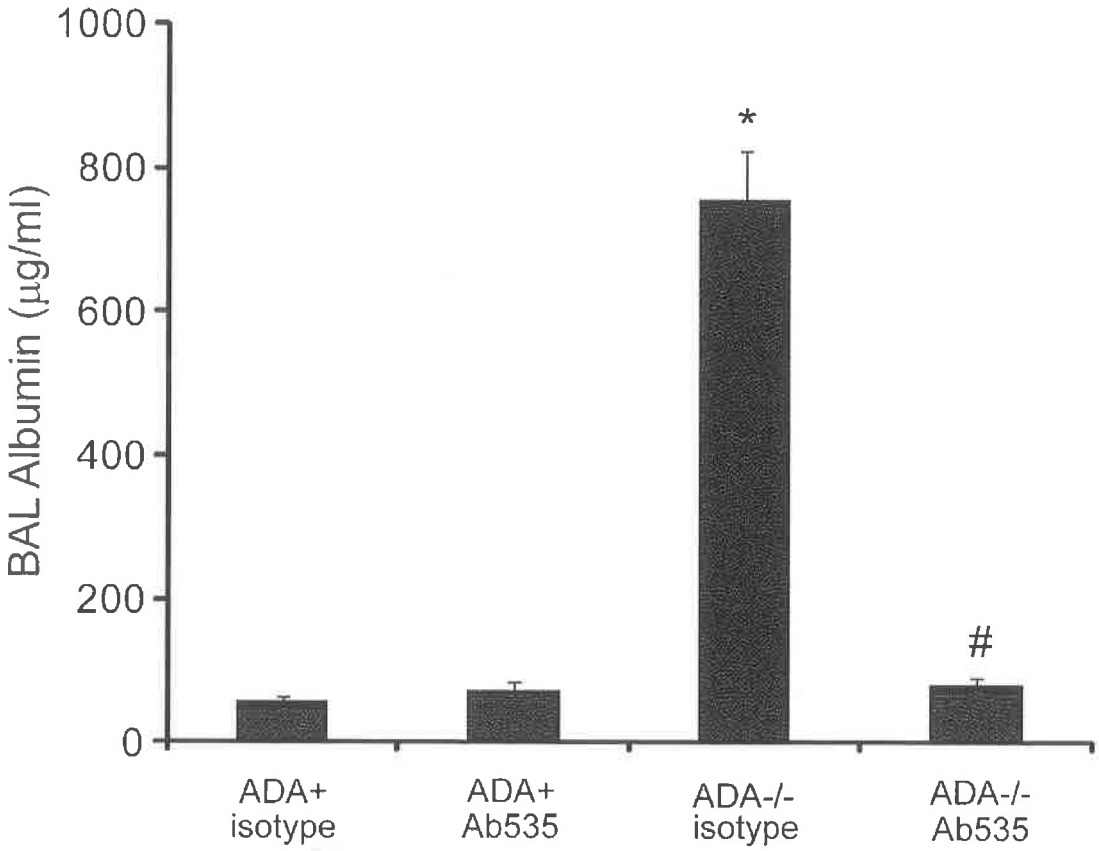
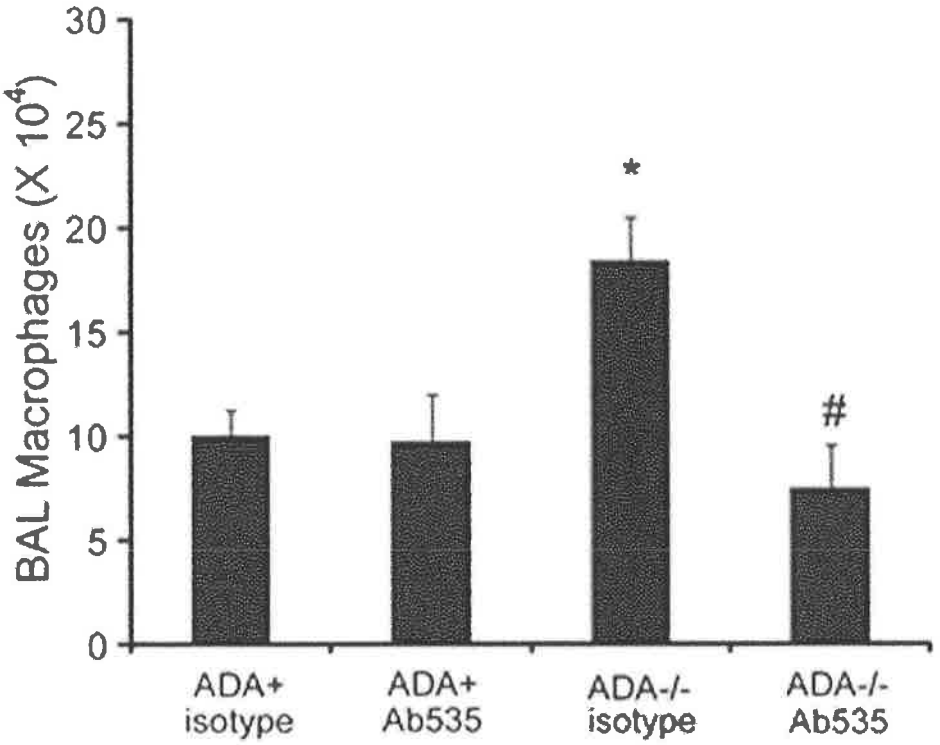

1000
800
600
400
200
0
BAL Albumin (µg/ml)
*
#
ADA+ isotype
ADA+ Ab535
ADA-/- isotype
ADA-/- Ab535

Fig 6d:



* Denotes significant difference from ADA+ (wild type); # denotes significant difference from ADA-/- mice treated with isotype control antibody ($p \leq 0.05$).

Figure 7

