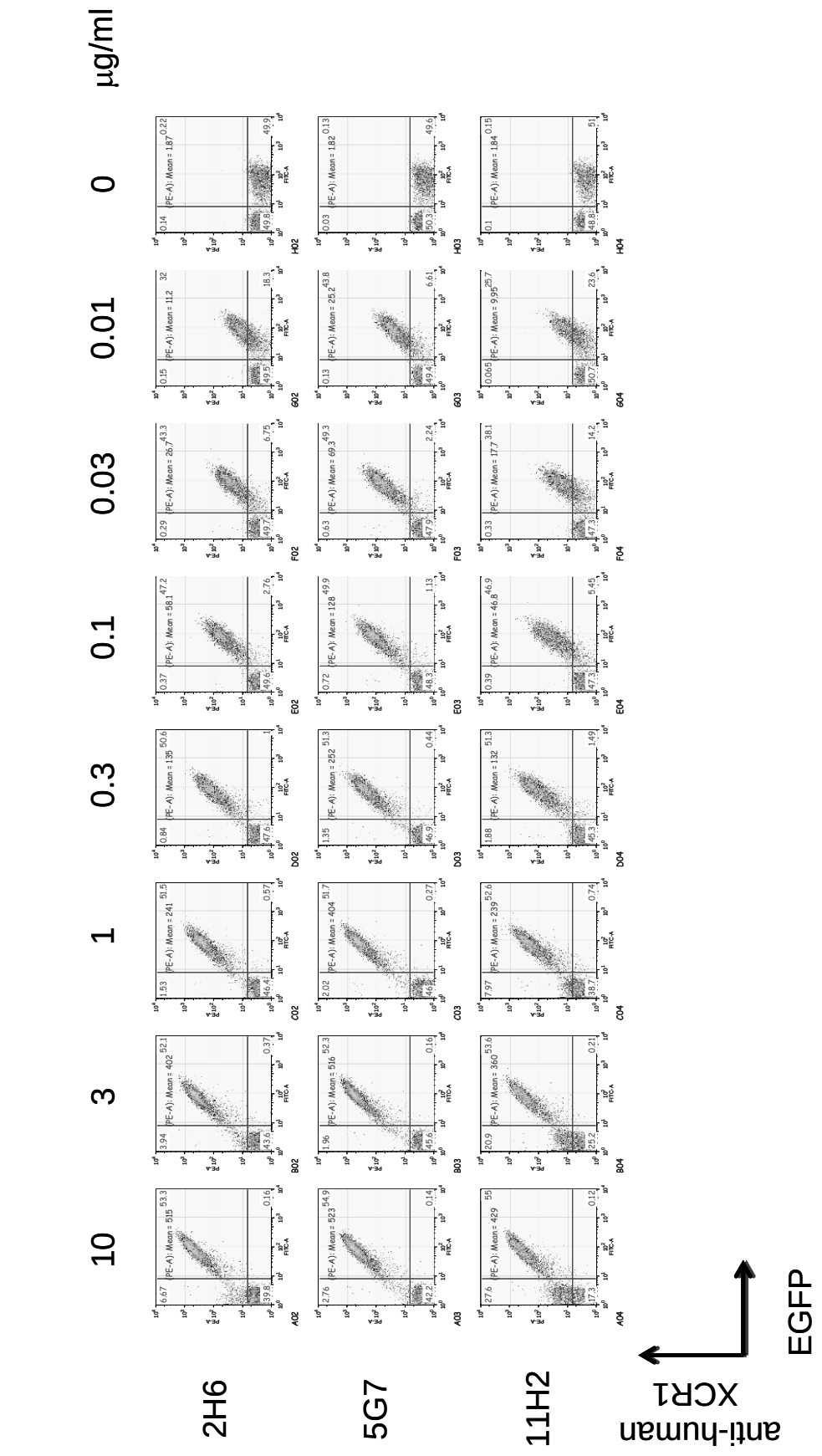
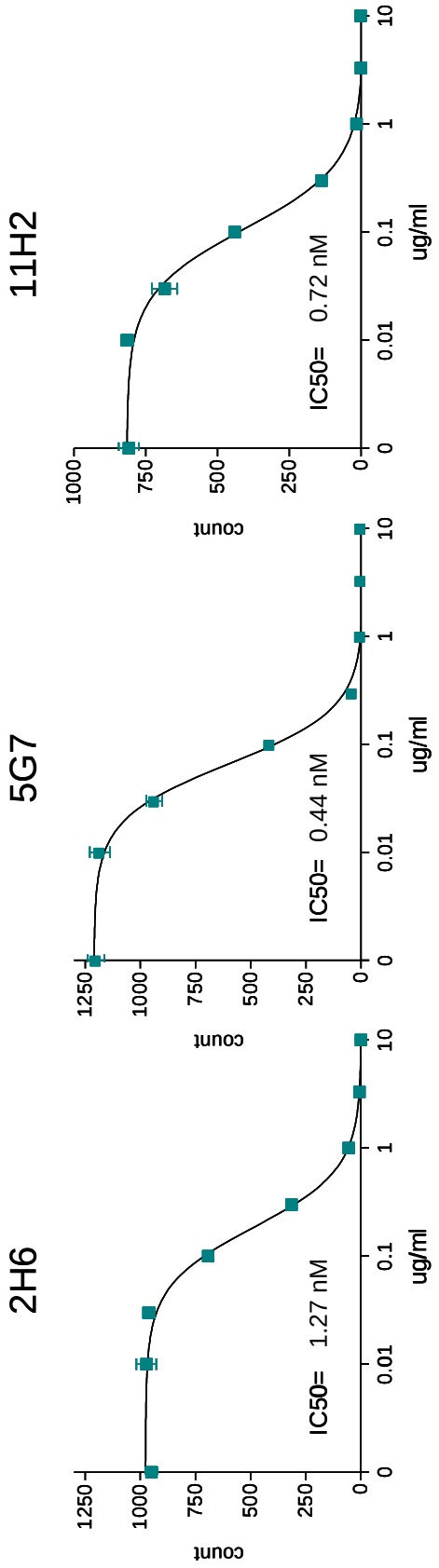
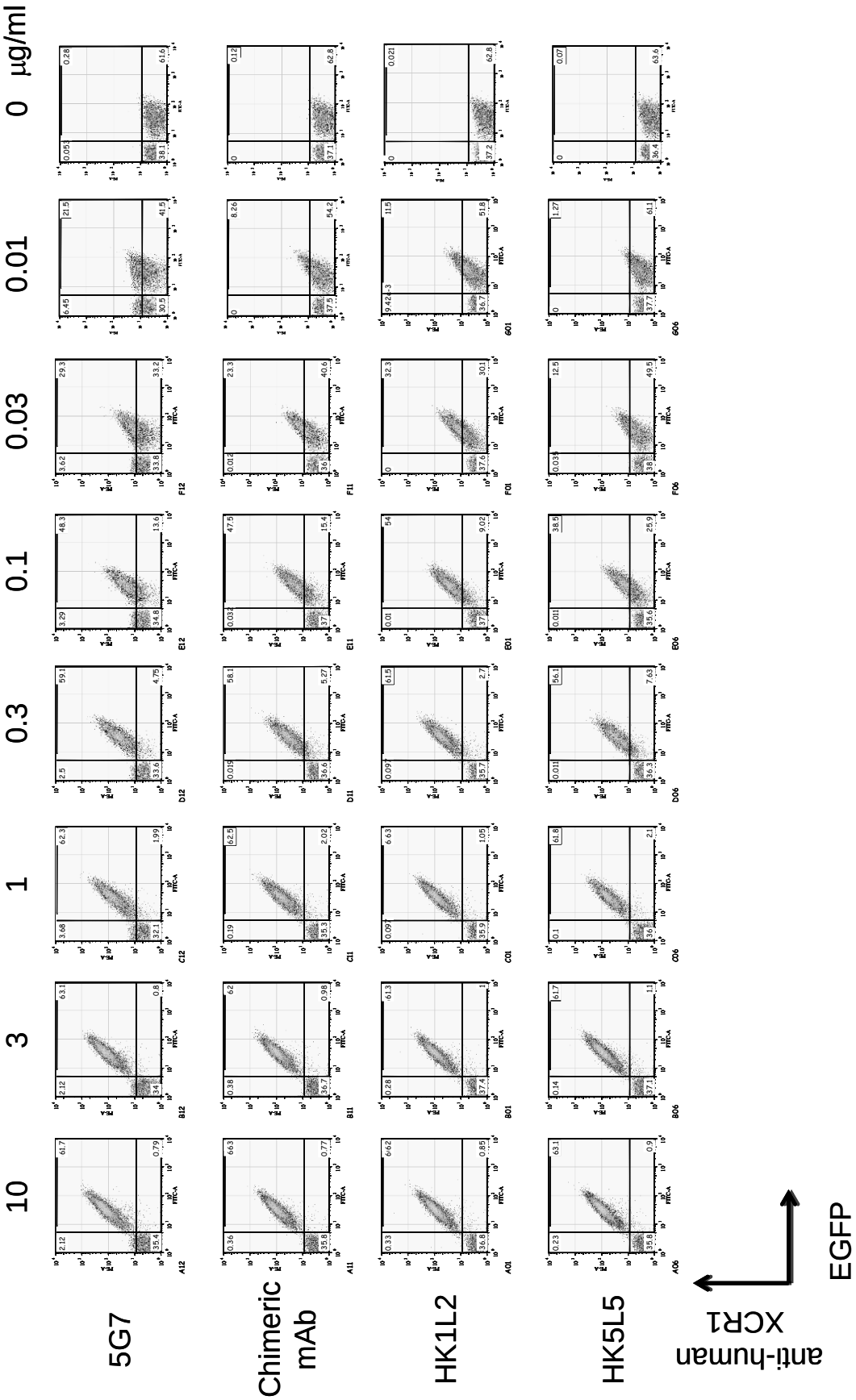
[Fig.1]



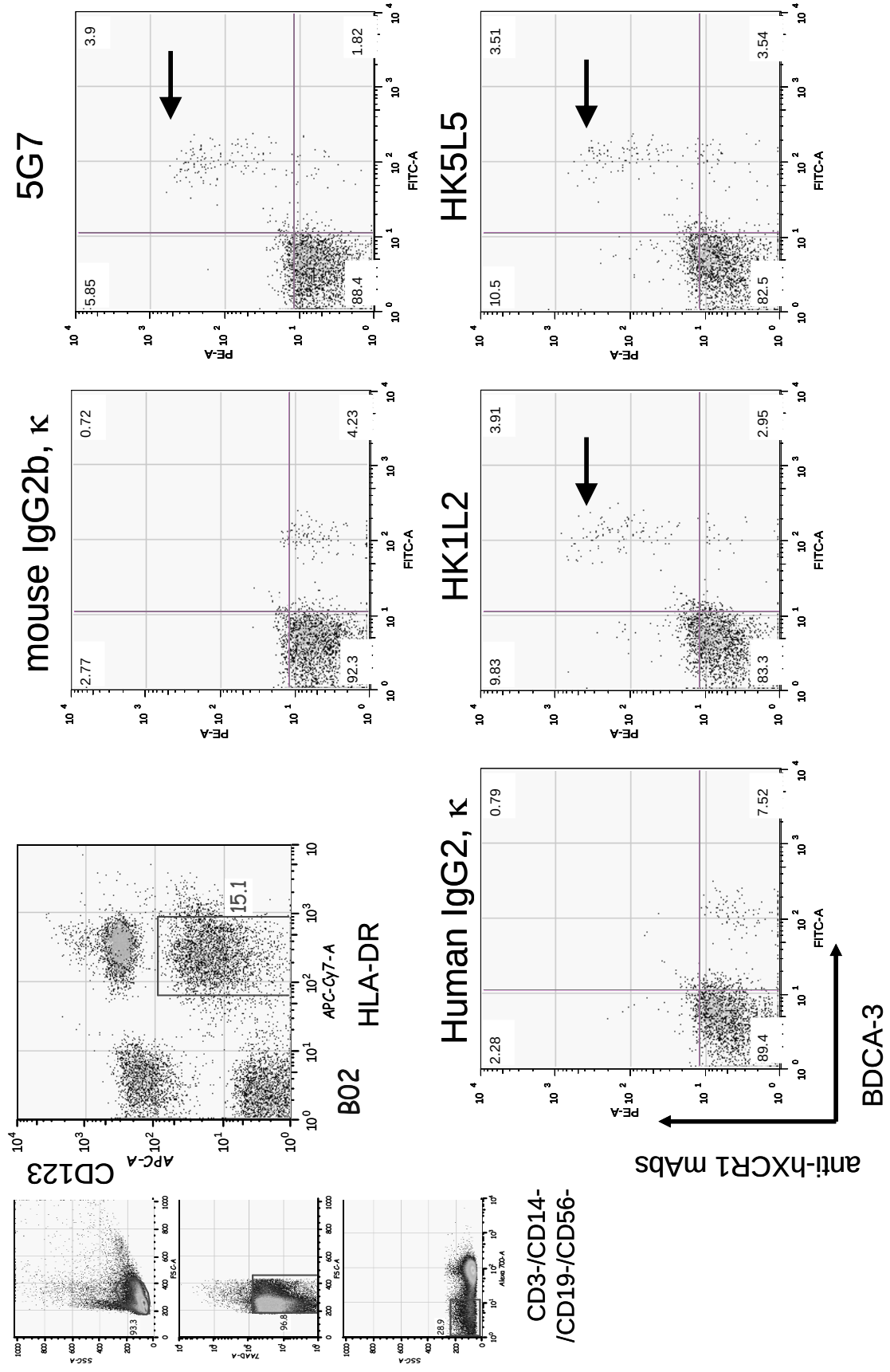
[Fig.2]


2H6
IC50= 1.27 nM
count
ug/ml
5G7
IC50= 0.44 nM
count
ug/ml
11H2
IC50= 0.72 nM
count
ug/ml

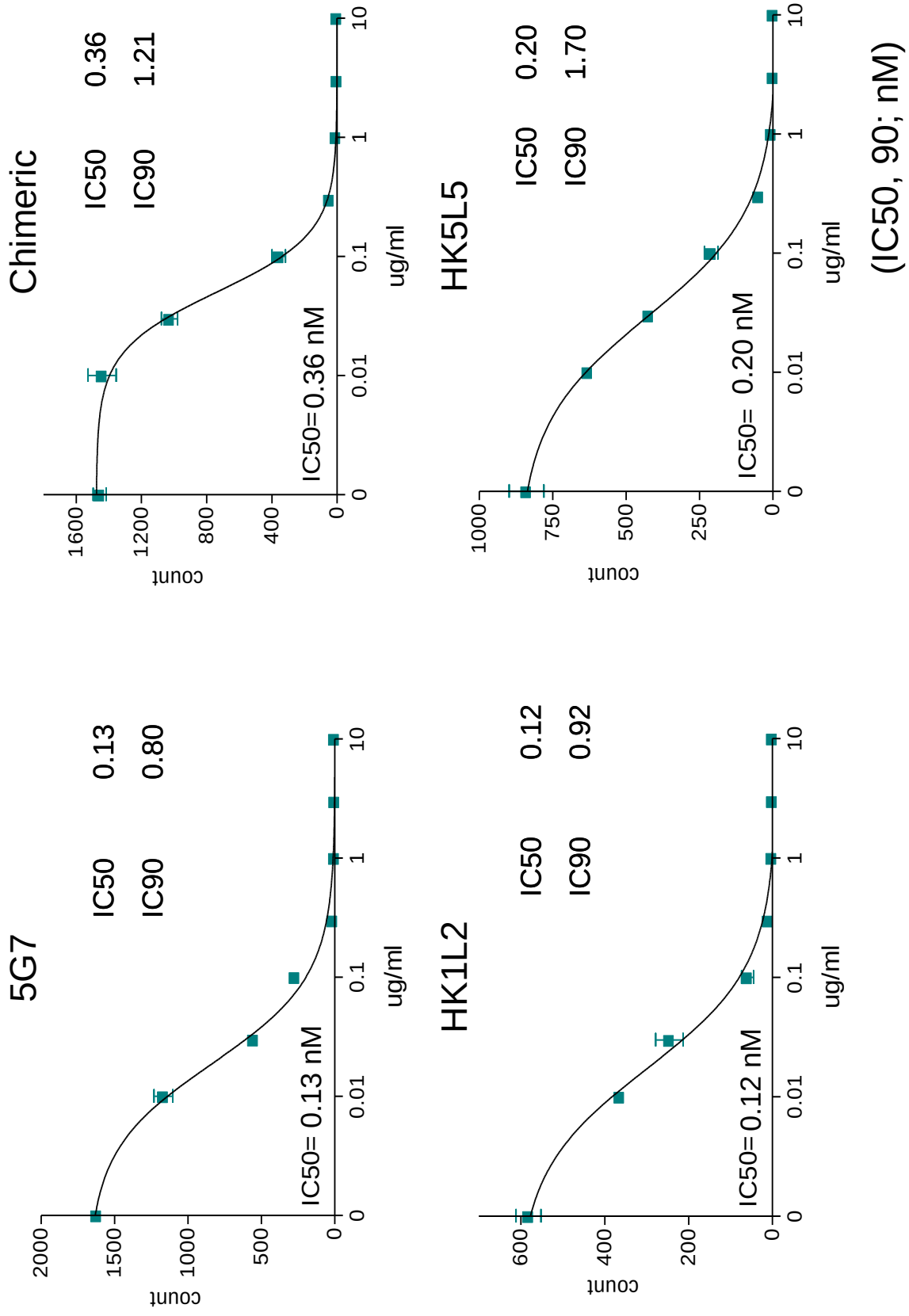
[Fig.3]


10
3
1
0.3
0.1
0.03
0.01
0 μg/ml
5G7
Chimeric mAb
HK1L2
HK5L5
anti-human XCR1
EGFP

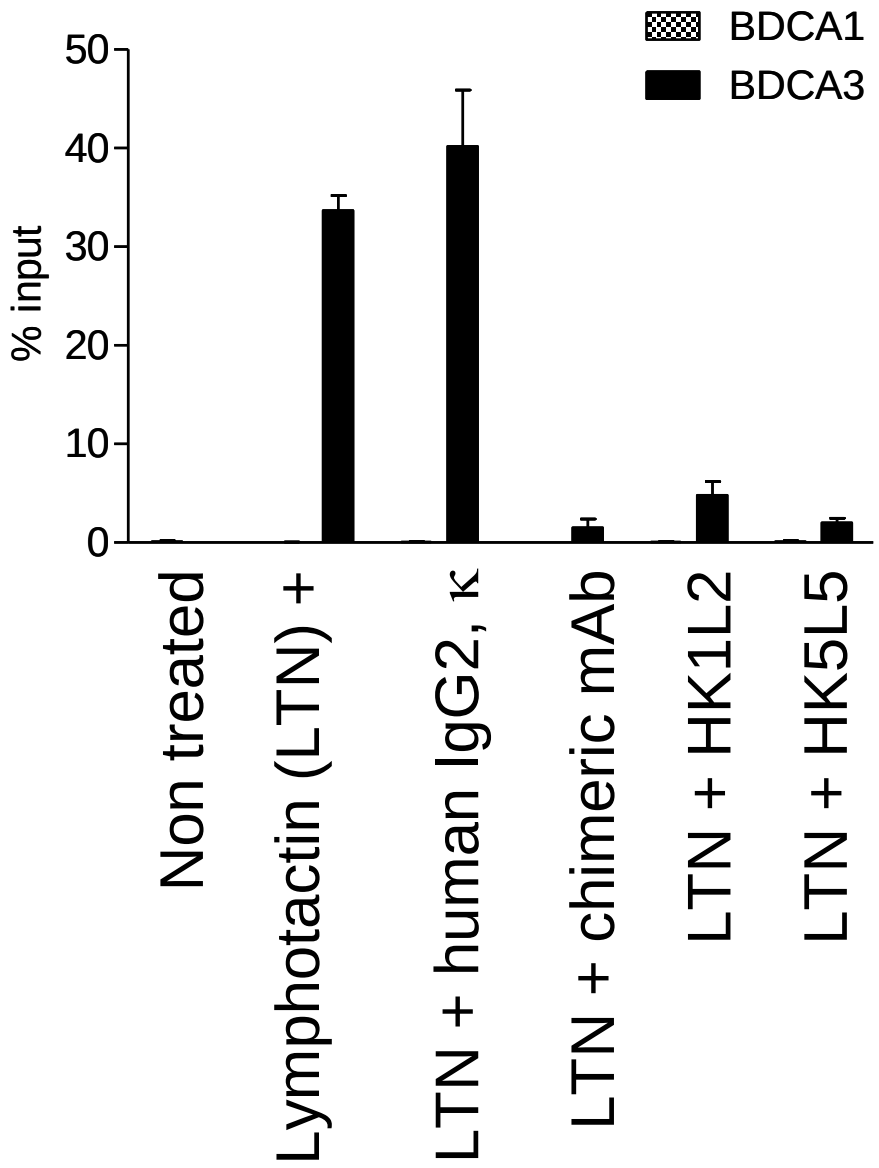
[Fig.4]


5G7
mouse IgG2b, κ
HK5L5
HK1L2
Human IgG2, κ
anti-hXCR1 mAbs
BDCA-3
CD123
HLA-DR
B02
CD3-/CD14-
/CD19-/CD56-
FITC-A
PE-A
APC-A
APC-Cy7-A
SSC-A
FSC-A
7AAD-A
15.1
3.9
1.82
5.85
88.4
0.72
4.23
2.77
92.3
3.51
3.54
10.5
82.5
3.91
2.95
9.83
83.3
0.79
7.52
2.28
89.4
93.3
96.8
28.9

[Fig.5]


Chimeric
IC50 0.36
IC90 1.21
IC50= 0.36 nM
5G7
IC50 0.13
IC90 0.80
IC50= 0.13 nM
HK5L5
IC50 0.20
IC90 1.70
IC50= 0.20 nM
HK1L2
IC50 0.12
IC90 0.92
IC50= 0.12 nM
count
ug/ml
(IC50, 90; nM)

[Fig.6]


BDCA1
BDCA3
% input
50
40
30
20
10
0
Non treated
Lymphotactin (LTN) +
LTN + human IgG2, κ
LTN + chimeric mAb
LTN + HK1L2
LTN + HK5L5

[Fig.7]

＜VH CDRs＞

CDR1

5G7 :SHN**L**H(SEQ ID No: 17)
2H6 :SHN**M**H(SEQ ID No: 29)
11H2:DYYVN(SEQ ID No: 41)
SHN**X**H(Seq ID No: 53)

CDR2

5G7 :AIYPG**N**GNT**A**YNQKFKG(SEQ ID No: 18)
2H6 :AIYPG**K**GNT**S**YNQKFKG(SEQ ID No: 30)
11H2:VSNPKNGDKSYNQKFKG(SEQ ID No: 42)
AIYPG**X**GNT**X**YNQKFKG(Seq ID No: 54)

CDR3

5G7 :WGSVVGDW•YFDV(SEQ ID No: 19)
2H6 :WGSVVGDW•YFDV(SEQ ID No: 31)
11H2:GLYYAGTYGYFDV(SEQ ID No: 42)
WGSVVGDW•YFDV(SEQ ID No: 55)

＜VL CDRs＞

CDR1

2H6 :RSS**QS**LVH**S**NGNTYLH(SEQ ID No: 20)
5G7 :RSS**LG**LVH**R**NGNTYLH(SEQ ID No: 32)
11H2:RASQDISNYLN (SEQ ID No: 44)
RSS**XX**LVH**X**NGNTYLH(SEQ ID No: 56)

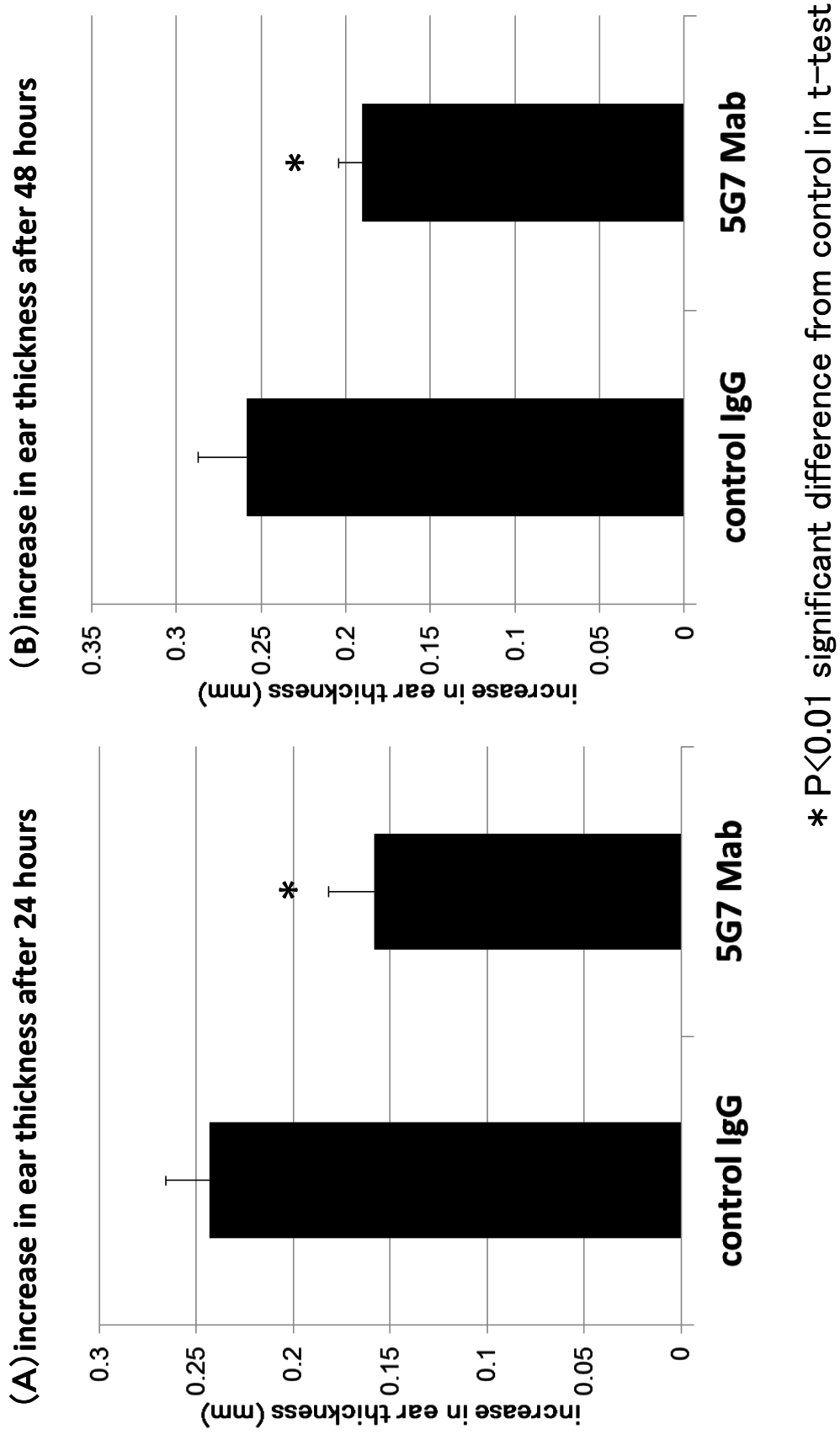
CDR2

5G7 :**K**VS**H**RFS(SEQ ID No: 21)
2H6 :**R**VS**N**RFS(SEQ ID No: 33)
11H2:YTSRLHS(SEQ ID No: 45)
XVS**X**RFS(SEQ ID No: 57)

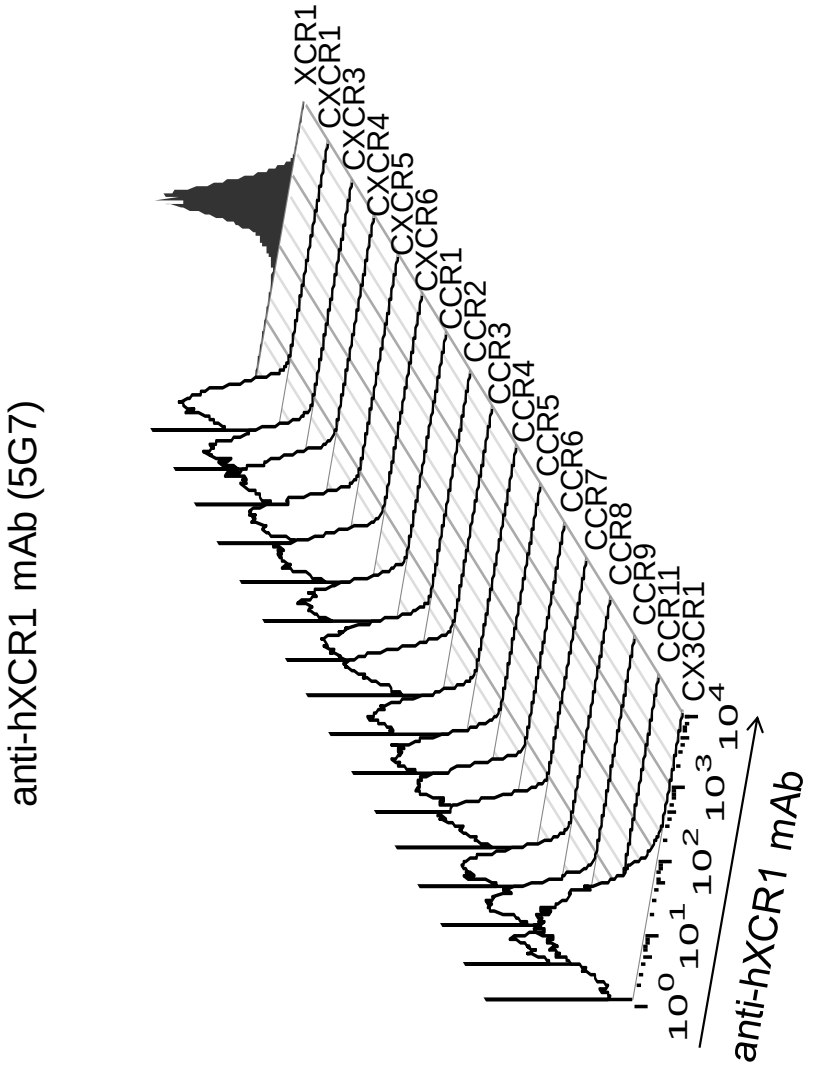
CDR3

5G7 :SQST**H**VPWT(SEQ ID No: 22)
2H6 :SQST**F**VPWT(SEQ ID No: 34)
11H2:QQGKTLPRT(SEQ ID No: 46)
SQST**X**VPWT(SEQ ID No: 58)

[Fig.8]


(A) increase in ear thickness after 24 hours
increase in ear thickness (mm)
0.3
0.25
0.2
0.15
0.1
0.05
0
*
control IgG
5G7 Mab
(B) increase in ear thickness after 48 hours
increase in ear thickness (mm)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
*
control IgG
5G7 Mab
* P<0.01 significant difference from control in t-test

[Fig.9]

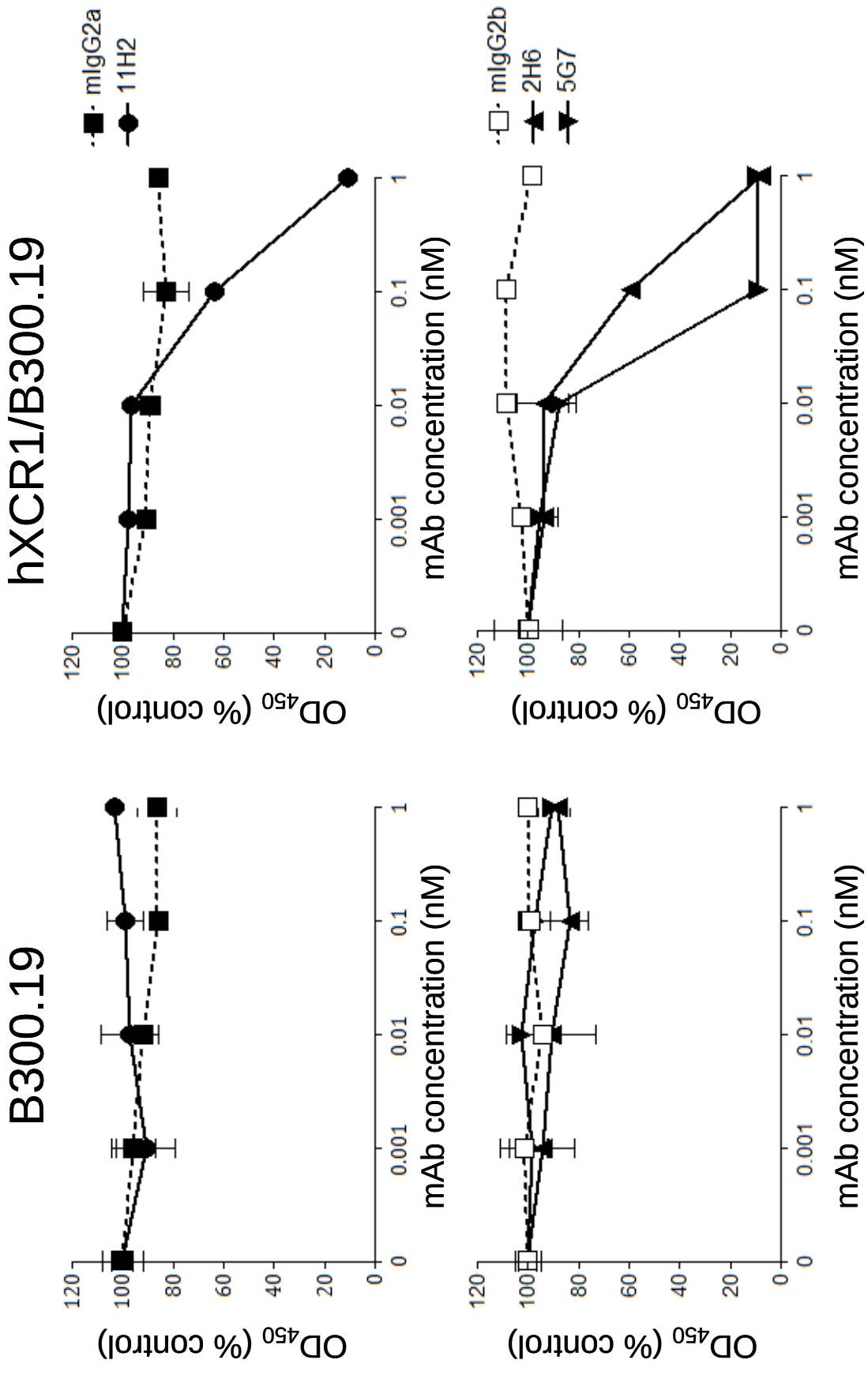

anti-hXCR1 mAb (5G7)
XCR1
CXCR1
CXCR3
CXCR4
CXCR5
CXCR6
CCR1
CCR2
CCR3
CCR4
CCR5
CCR6
CCR7
CCR8
CCR9
CCR11
CX3CR1
10^0 10^1 10^2 10^3 10^4
anti-hXCR1 mAb

[Fig.10]

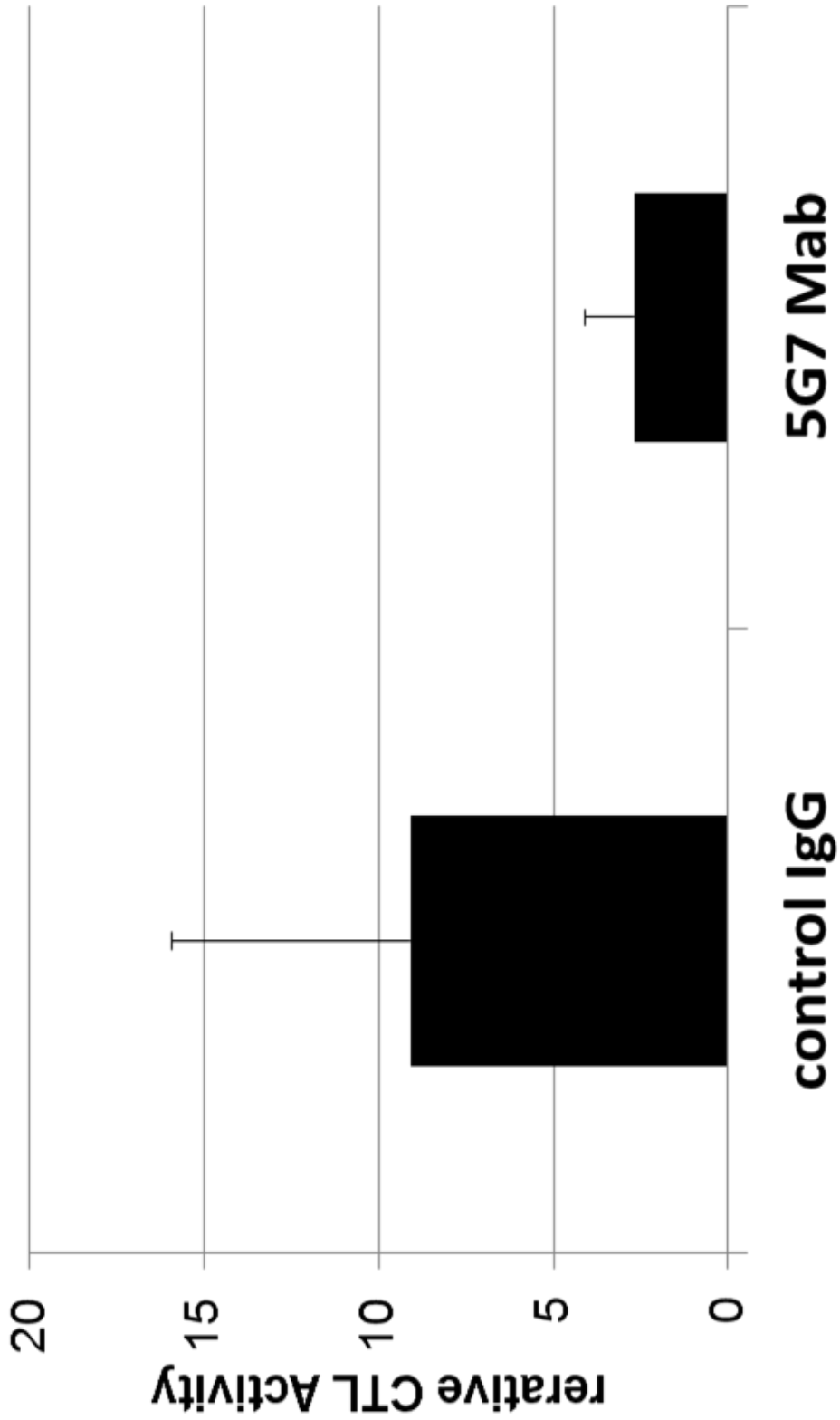
<211> 333
<212> PRT
<213> Abramis brama

```
Met Glu Ser Ser Gly Asn Pro Glu Ser Thr Thr Phe Phe Tyr Tyr Asp
1               5                  10                  15
Leu Gln Ser Gln Pro Cys Glu Asn Gln Ala Trp Val Phe Ala Thr Leu
            20                  25                  30
Ala Thr Thr Val Leu Tyr Cys Leu Val Phe Leu Leu Ser Leu Val Gly
        35                  40                  45
Asn Ser Leu Val Leu Trp Val Leu Val Lys Tyr Glu Ser Leu Glu Ser
    50                  55                  60
Leu Thr Asn Ile Phe Ile Leu Asn Leu Cys Leu Ser Asp Leu Val Phe
65                  70                  75                  80
Ala Cys Leu Leu Pro Val Trp Ile Ser Pro Tyr His Trp Gly Trp Val
                85                  90                  95
Leu Gly Asp Phe Leu Cys Lys Leu Leu Asn Met Ile Phe Ser Ile Ser
            100                 105                 110
Leu Tyr Ser Ser Ile Phe Phe Leu Thr Ile Met Thr Ile His Arg Tyr
        115                 120                 125
Leu Ser Val Val Ser Pro Leu Ser Thr Leu Arg Val Pro Thr Leu Arg
    130                 135                 140
Cys Arg Val Leu Val Thr Met Ala Val Trp Val Ala Ser Ile Leu Ser
145                 150                 155                 160
Ser Ile Leu Asp Thr Ile Phe His Lys Val Leu Ser Ser Gly Cys Asp
                165                 170                 175
Tyr Ser Glu Leu Thr Trp Tyr Leu Thr Ser Val Tyr Gln His Asn Leu
            180                 185                 190
Phe Phe Leu Leu Ser Leu Gly Ile Ile Leu Phe Cys Tyr Val Glu Ile
        195                 200                 205
Leu Arg Thr Leu Phe Arg Ser Arg Ser Lys Arg Arg His Arg Thr Val
    210                 215                 220
Lys Leu Ile Phe Ala Ile Val Val Ala Tyr Phe Leu Ser Trp Gly Pro
225                 230                 235                 240
Tyr Asn Phe Thr Leu Phe Leu Gln Thr Leu Phe Arg Thr Gln Ile Ile
                245                 250                 255
Arg Ser Cys Glu Ala Lys Gln Gln Leu Glu Tyr Ala Leu Leu Ile Cys
            260                 265                 270
Arg Asn Leu Ala Phe Ser His Cys Cys Phe Asn Pro Val Leu Tyr Val
        275                 280                 285
Phe Val Gly Val Lys Phe Arg Thr His Leu Lys His Val Leu Arg Gln
    290                 295                 300
Phe Trp Phe Cys Arg Leu Gln Ala Pro Ser Pro Ala Ser Ile Pro His
305                 310                 315                 320
Ser Pro Gly Ala Phe Ala Tyr Glu Gly Ala Ser Phe Tyr
                325                 330
```

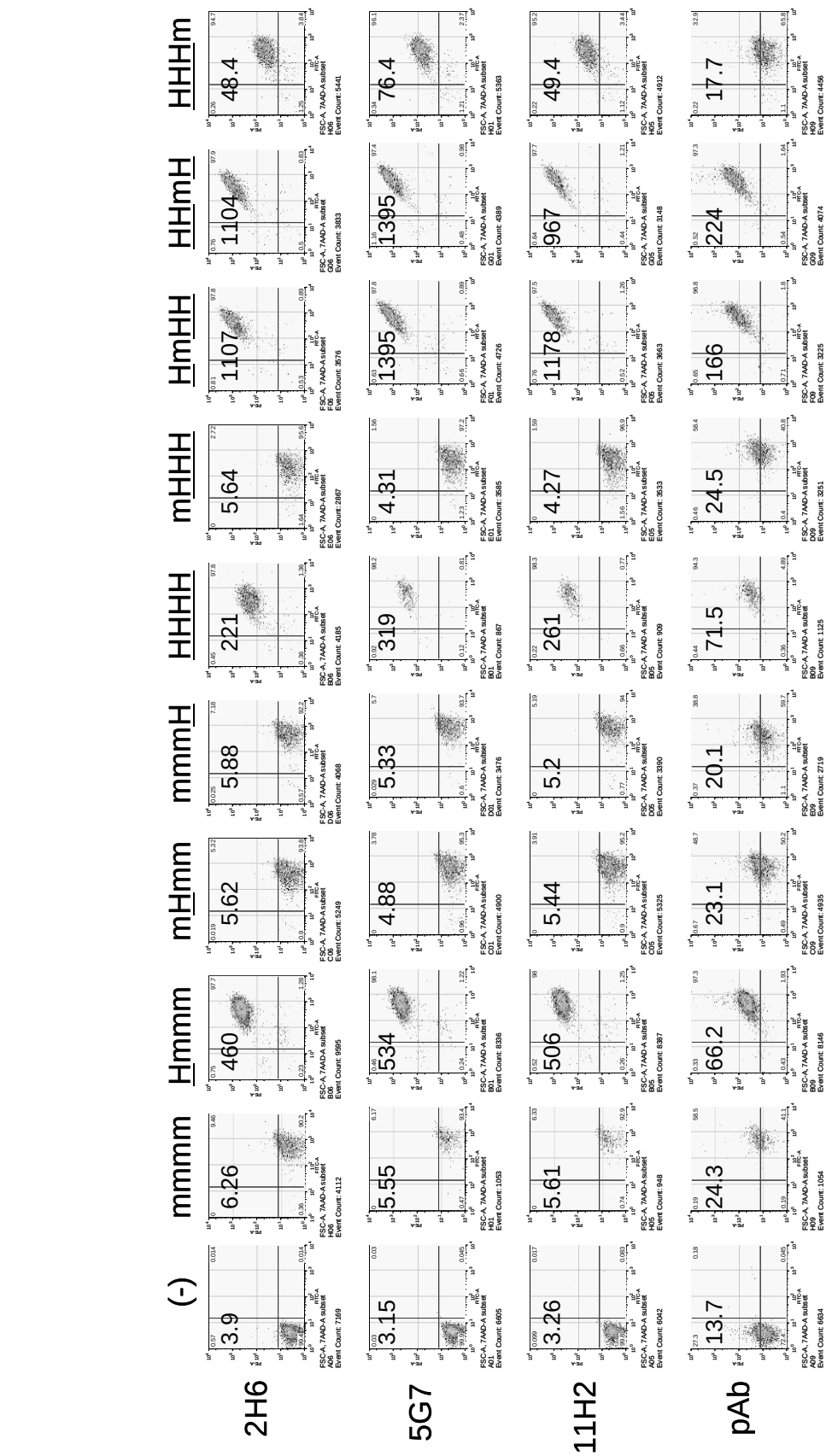
[Fig.11]


hXCR1/B300.19
B300.19
mIgG2a
11H2
mIgG2b
2H6
5G7
OD450 (% control)
mAb concentration (nM)
0
20
40
60
80
100
120
0
0.001
0.01
0.1
1

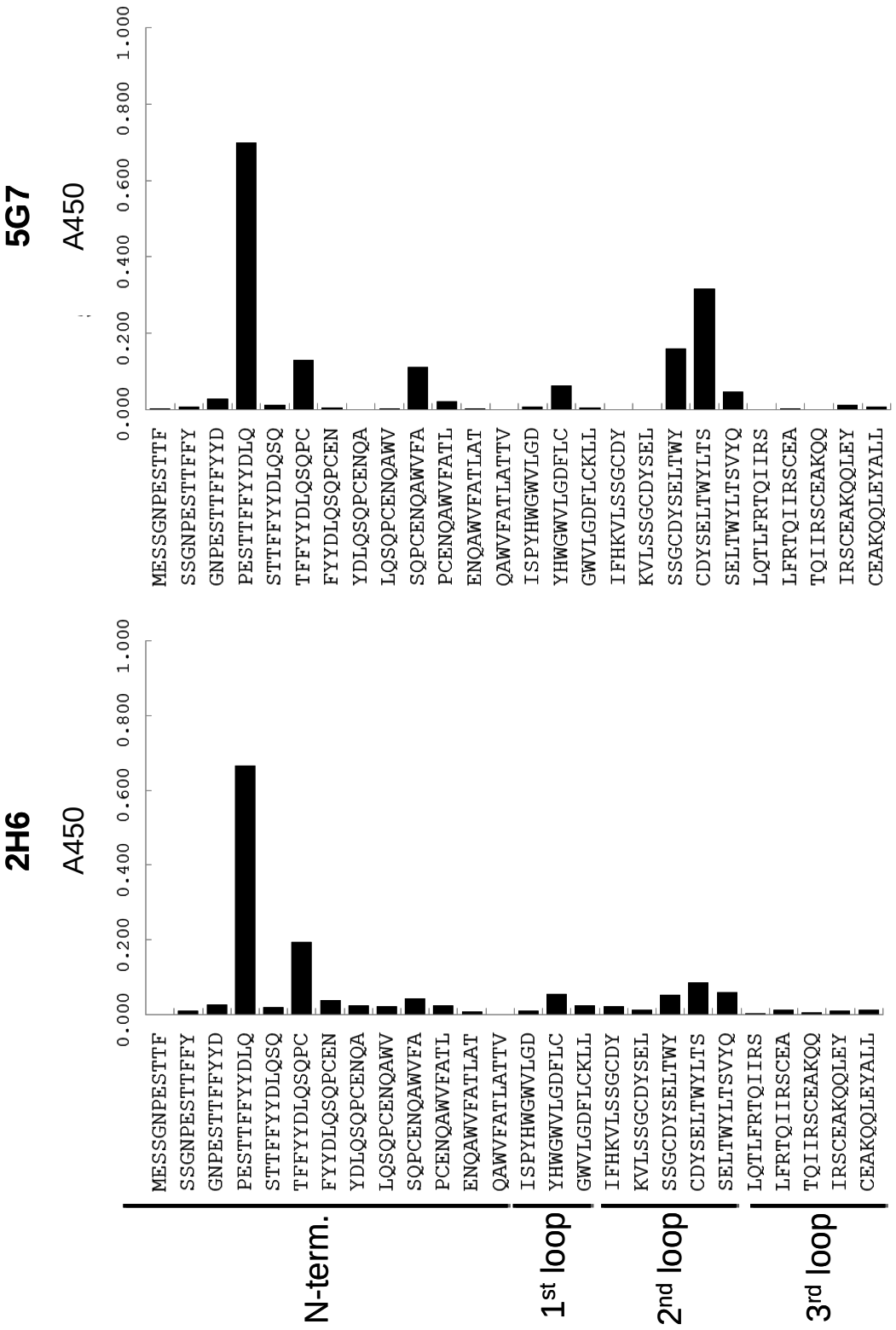
[Fig.12]



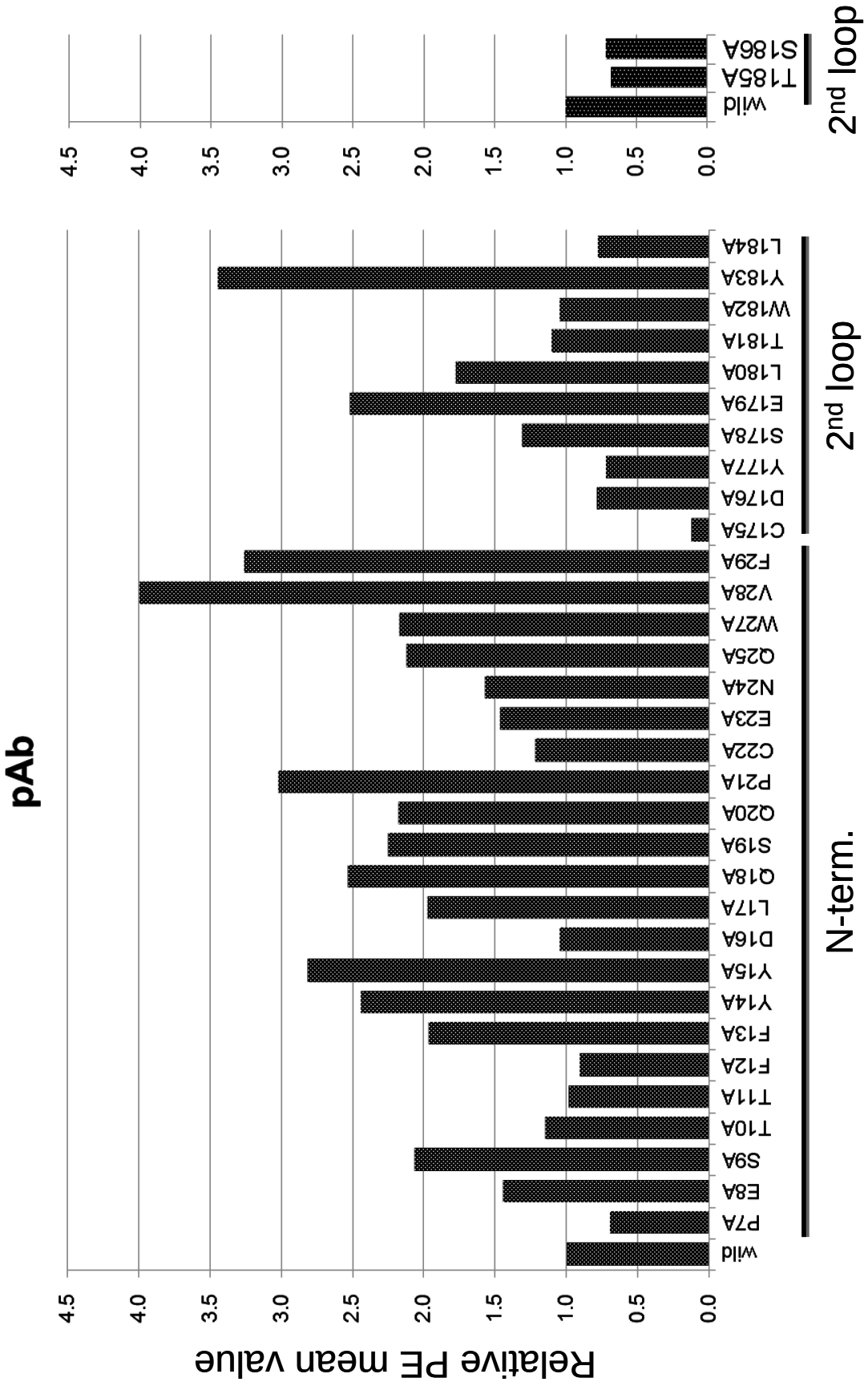
[Fig.13]


(-)
mmmm
Hmmm
mHmm
mmmH
HHHH
mHHH
HmHH
HHmH
HHHm
2H6
5G7
11H2
pAb
3.9
6.26
460
5.62
5.88
221
5.64
1107
1104
48.4
3.15
5.55
534
4.88
5.33
319
4.31
1395
1395
76.4
3.26
5.61
506
5.44
5.2
261
4.27
1178
967
49.4
13.7
24.3
66.2
23.1
20.1
71.5
24.5
166
224
17.7

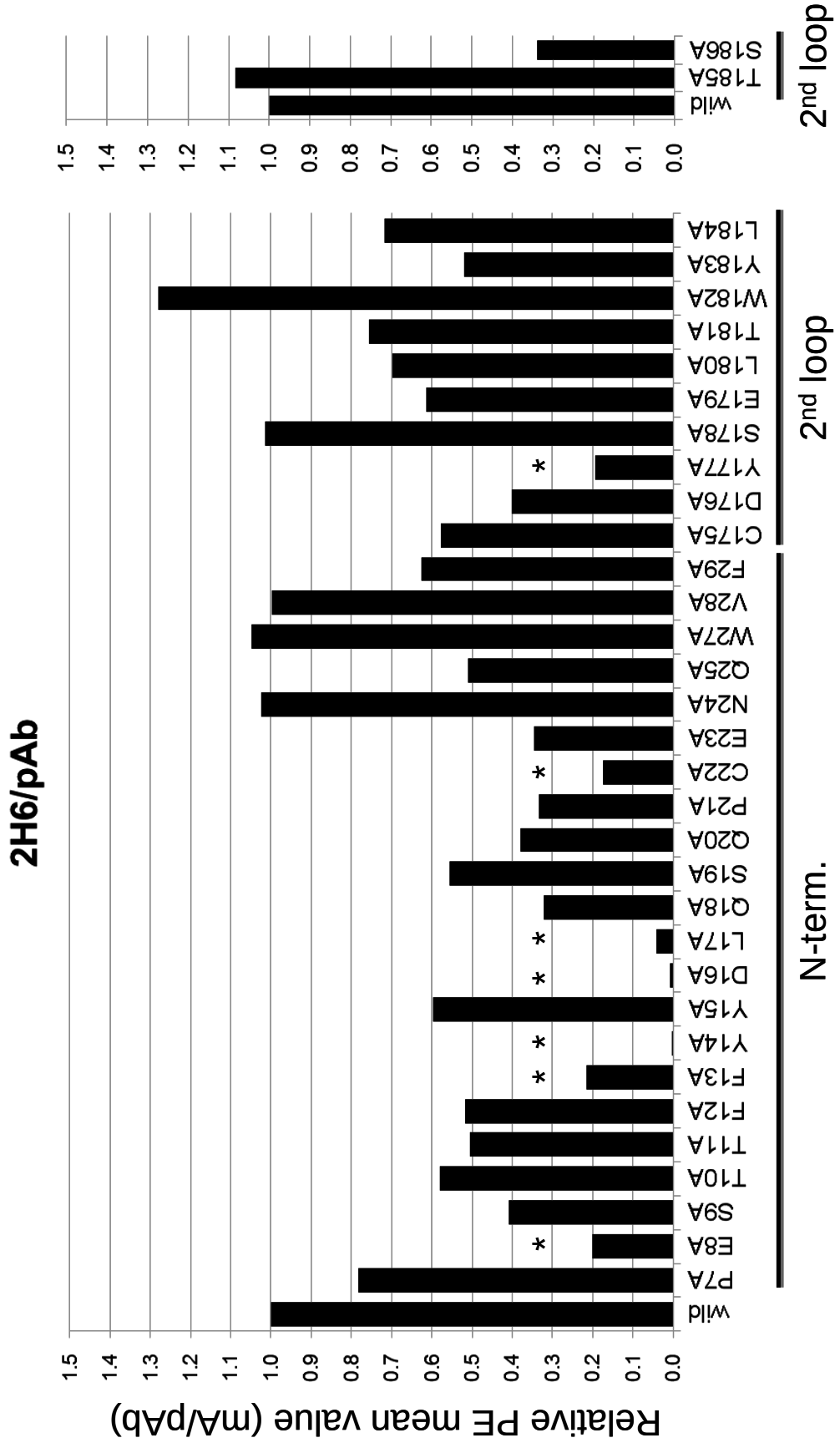
[Fig.14]


5G7
A450
0.000
0.200
0.400
0.600
0.800
1.000
MESSGNPESTTF
SSGNPESTTFFY
GNPESTTFFYYD
PESTTFFYYDLQ
STTFFYYDLQSQ
TFFYYDLQSQPC
FYYDLQSQPCEN
YDLQSQPCENQA
LQSQPCENQAWV
SQPCENQAWVFA
PCENQAWVFATL
ENQAWVFATLAT
QAWVFATLATTV
ISPYHWGWVLGD
YHWGWVLGDFLC
GWVLGDFLCKLL
IFHKVLSSGCDY
KVLSSGCDYSEL
SSGCDYSELTWY
CDYSELTWYLTS
SELTWYLTSVYQ
LQTLFRTQIIRS
LFRTQIIRSCEA
TQIIRSCEAKQQ
IRSCEAKQQLEY
CEAKQQLEYALL
2H6
A450
0.000
0.200
0.400
0.600
0.800
1.000
MESSGNPESTTF
SSGNPESTTFFY
GNPESTTFFYYD
PESTTFFYYDLQ
STTFFYYDLQSQ
TFFYYDLQSQPC
FYYDLQSQPCEN
YDLQSQPCENQA
LQSQPCENQAWV
SQPCENQAWVFA
PCENQAWVFATL
ENQAWVFATLAT
QAWVFATLATTV
ISPYHWGWVLGD
YHWGWVLGDFLC
GWVLGDFLCKLL
IFHKVLSSGCDY
KVLSSGCDYSEL
SSGCDYSELTWY
CDYSELTWYLTS
SELTWYLTSVYQ
LQTLFRTQIIRS
LFRTQIIRSCEA
TQIIRSCEAKQQ
IRSCEAKQQLEY
CEAKQQLEYALL
N-term.
1st loop
2nd loop
3rd loop

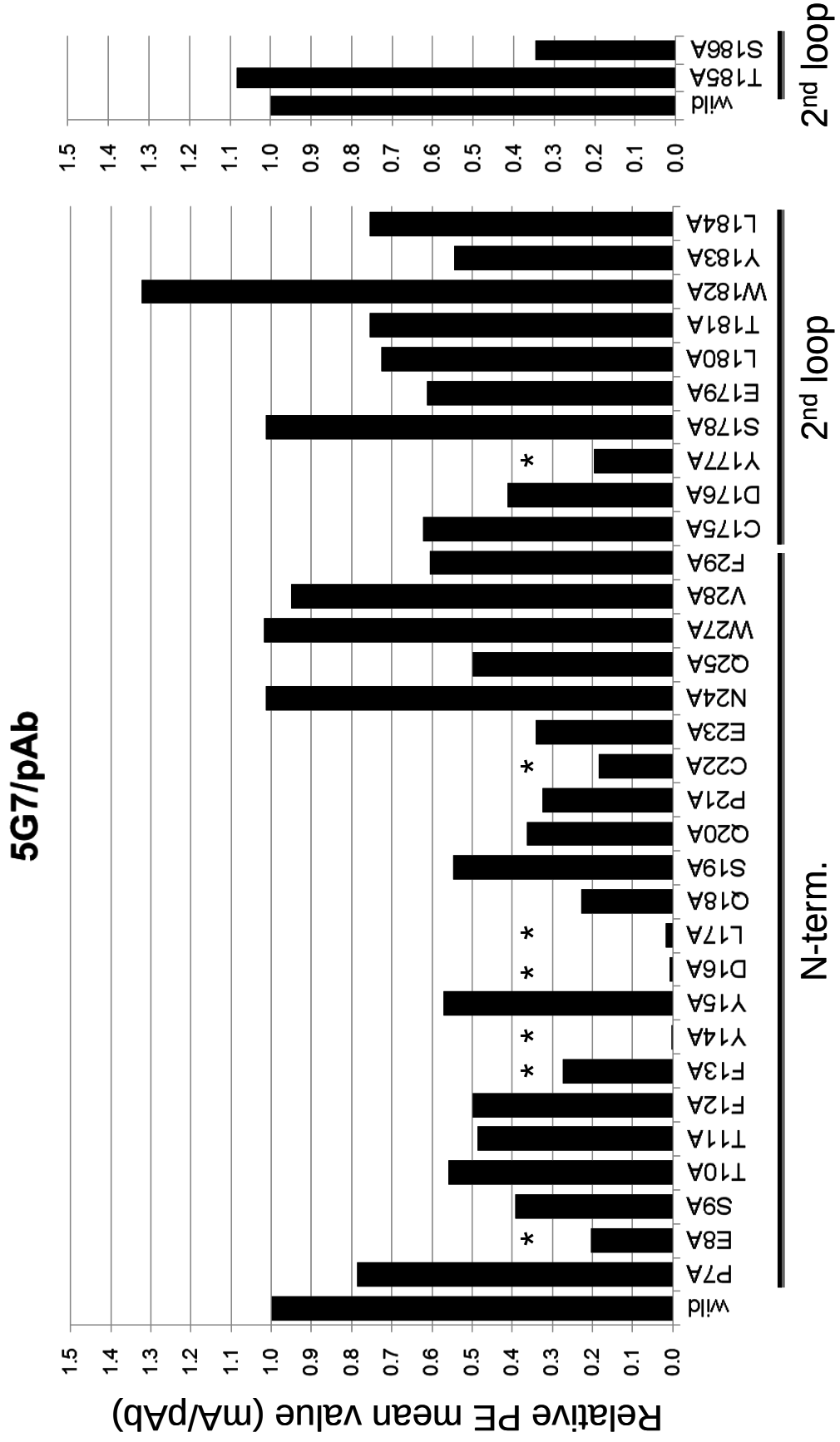
[Fig.15]


pAb
Relative PE mean value
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
wild
P7A
E8A
S9A
T10A
T11A
F12A
F13A
Y14A
Y15A
D16A
L17A
Q18A
S19A
Q20A
P21A
C22A
E23A
N24A
Q25A
W27A
V28A
F29A
C175A
D176A
Y177A
S178A
E179A
L180A
T181A
W182A
Y183A
L184A
N-term.
2nd loop
2nd loop
wild
T185A
S186A

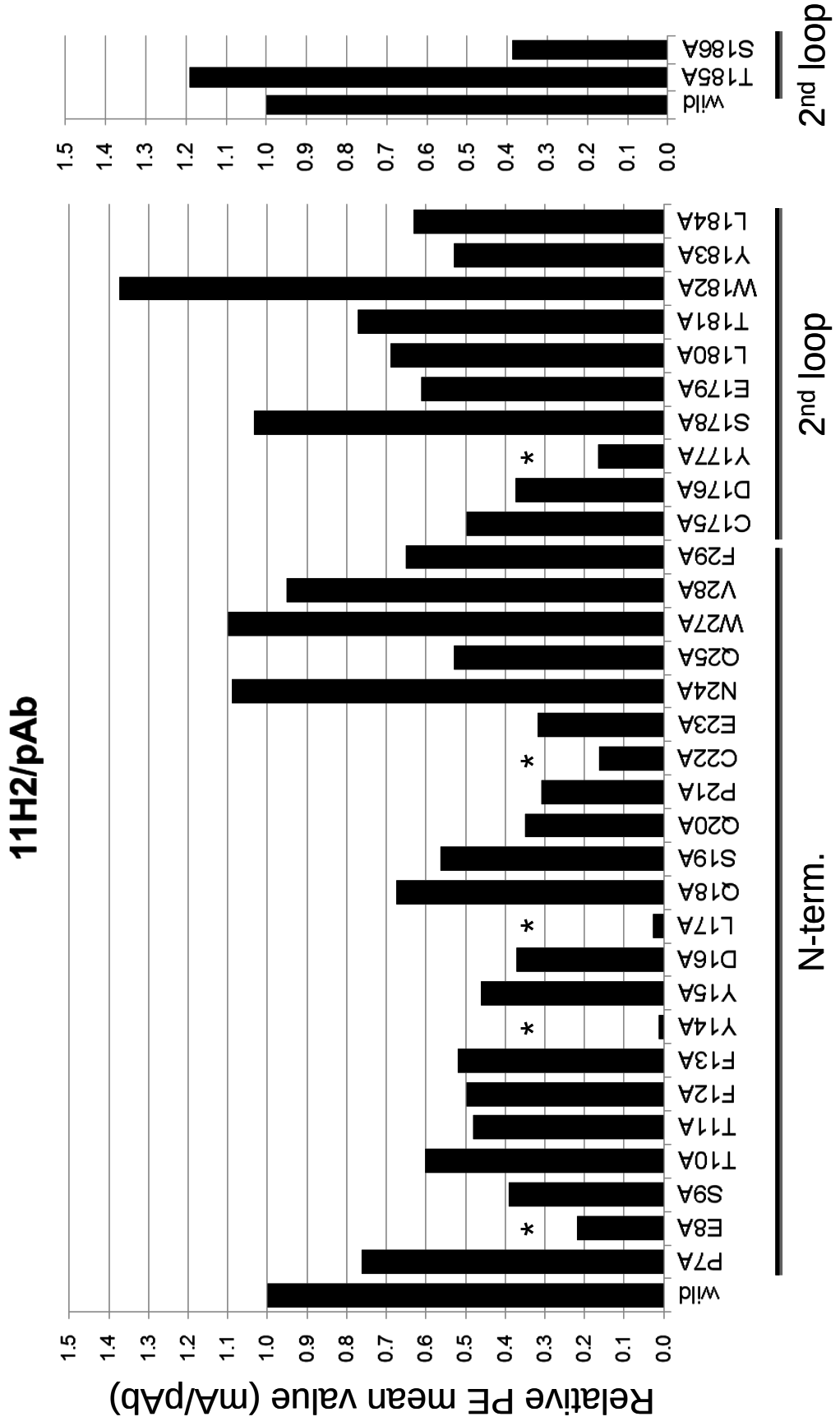
[Fig.16]


2H6/pAb
Relative PE mean value (mA/pAb)
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
wild
P7A
E8A
S9A
T10A
T11A
F12A
F13A
Y14A
Y15A
D16A
L17A
Q18A
S19A
Q20A
P21A
C22A
E23A
N24A
Q25A
W27A
V28A
F29A
C175A
D176A
Y177A
S178A
E179A
L180A
T181A
W182A
Y183A
L184A
N-term.
2nd loop
wild
T185A
S186A
2nd loop
*

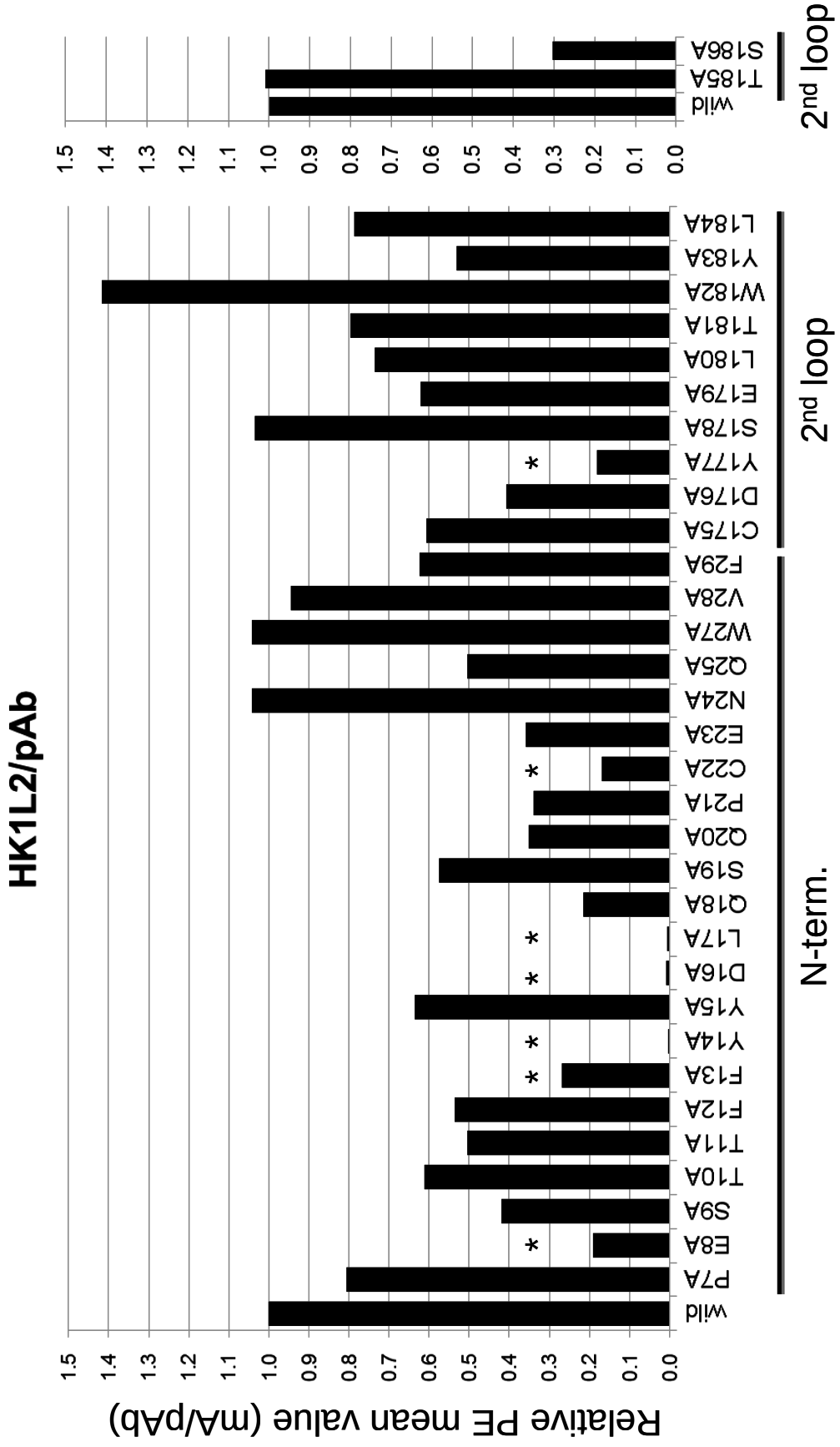
[Fig.17]


5G7/pAb
Relative PE mean value (mA/pAb)
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
wild
P7A
E8A
S9A
T10A
T11A
F12A
F13A
Y14A
Y15A
D16A
L17A
Q18A
S19A
Q20A
P21A
C22A
E23A
N24A
Q25A
W27A
V28A
F29A
C175A
D176A
Y177A
S178A
E179A
L180A
T181A
W182A
Y183A
L184A
S186A
T185A
wild
N-term.
2nd loop
2nd loop
*

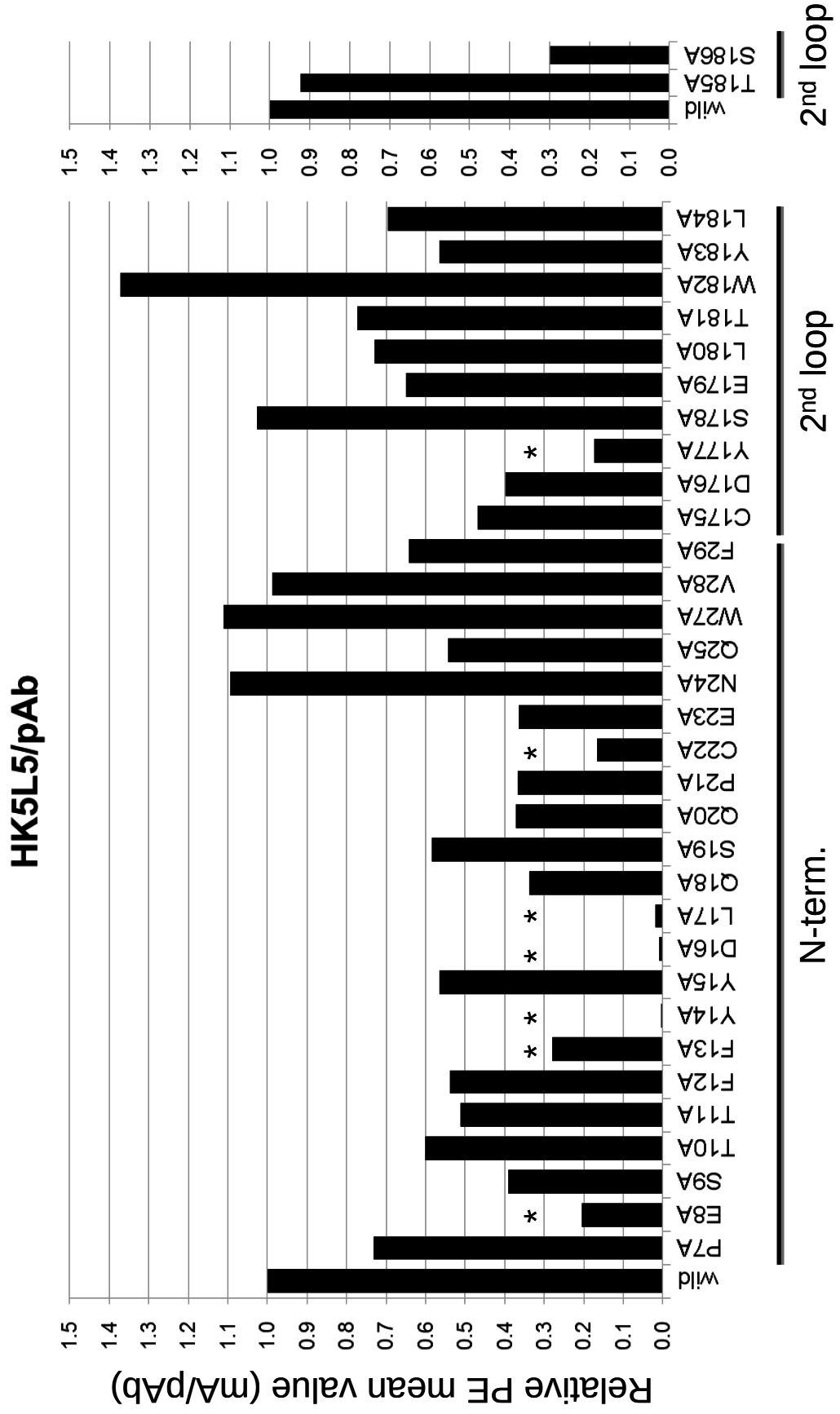
[Fig.18]


11H2/pAb
Relative PE mean value (mA/pAb)
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
wild
P7A
E8A
S9A
T10A
T11A
F12A
F13A
Y14A
Y15A
D16A
L17A
Q18A
S19A
Q20A
P21A
C22A
E23A
N24A
Q25A
W27A
V28A
F29A
C175A
D176A
Y177A
S178A
E179A
L180A
T181A
W182A
Y183A
L184A
wild
T185A
S186A
N-term.
2nd loop
2nd loop
*
*
*
*

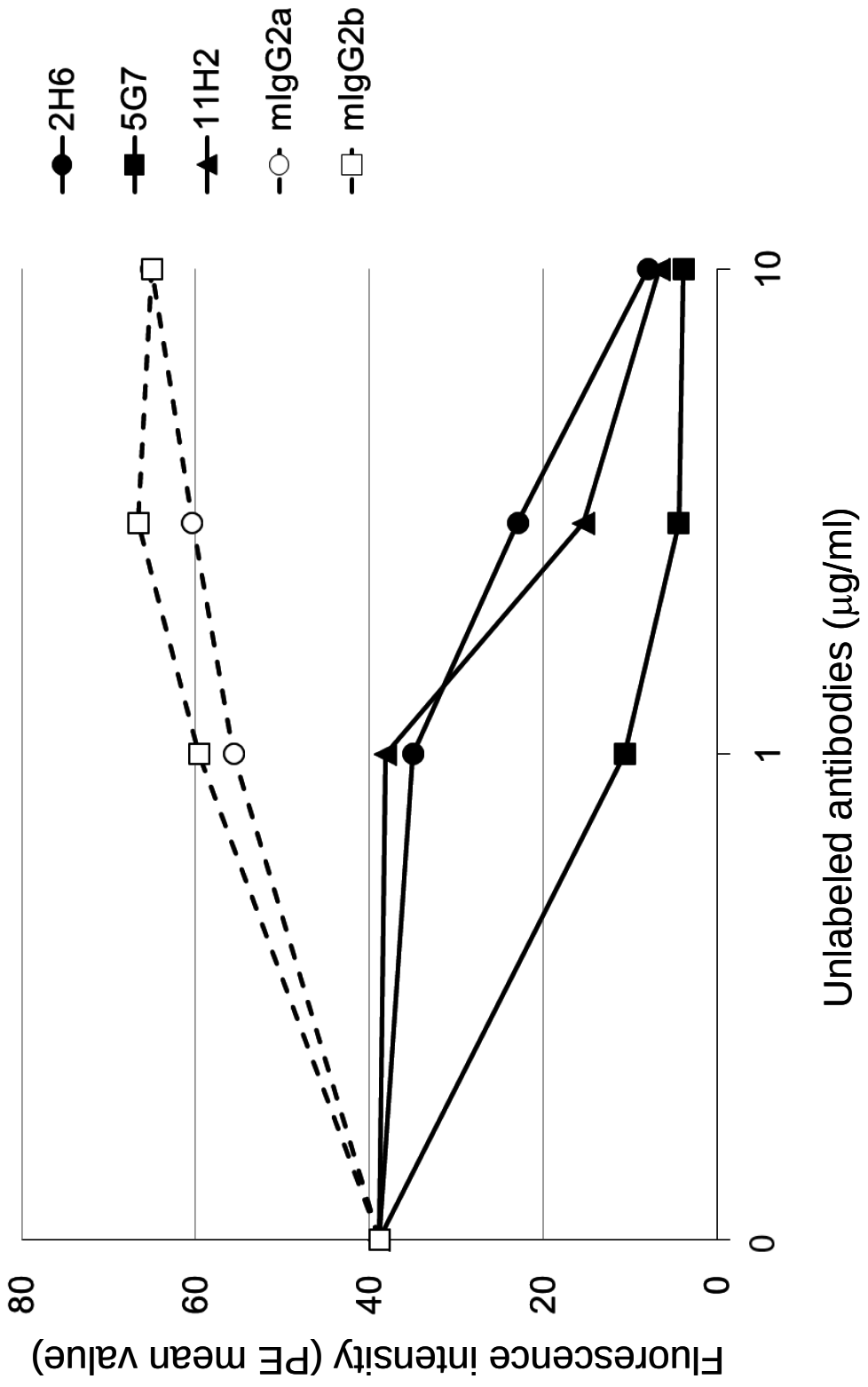
[Fig.19]


HK1L2/pAb
Relative PE mean value (mA/pAb)
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
wild
P7A
E8A
S9A
T10A
T11A
F12A
F13A
Y14A
Y15A
D16A
L17A
Q18A
S19A
Q20A
P21A
C22A
E23A
N24A
Q25A
W27A
V28A
F29A
C175A
D176A
Y177A
S178A
E179A
L180A
T181A
W182A
Y183A
L184A
N-term.
2nd loop
wild
T185A
S186A
2nd loop
*

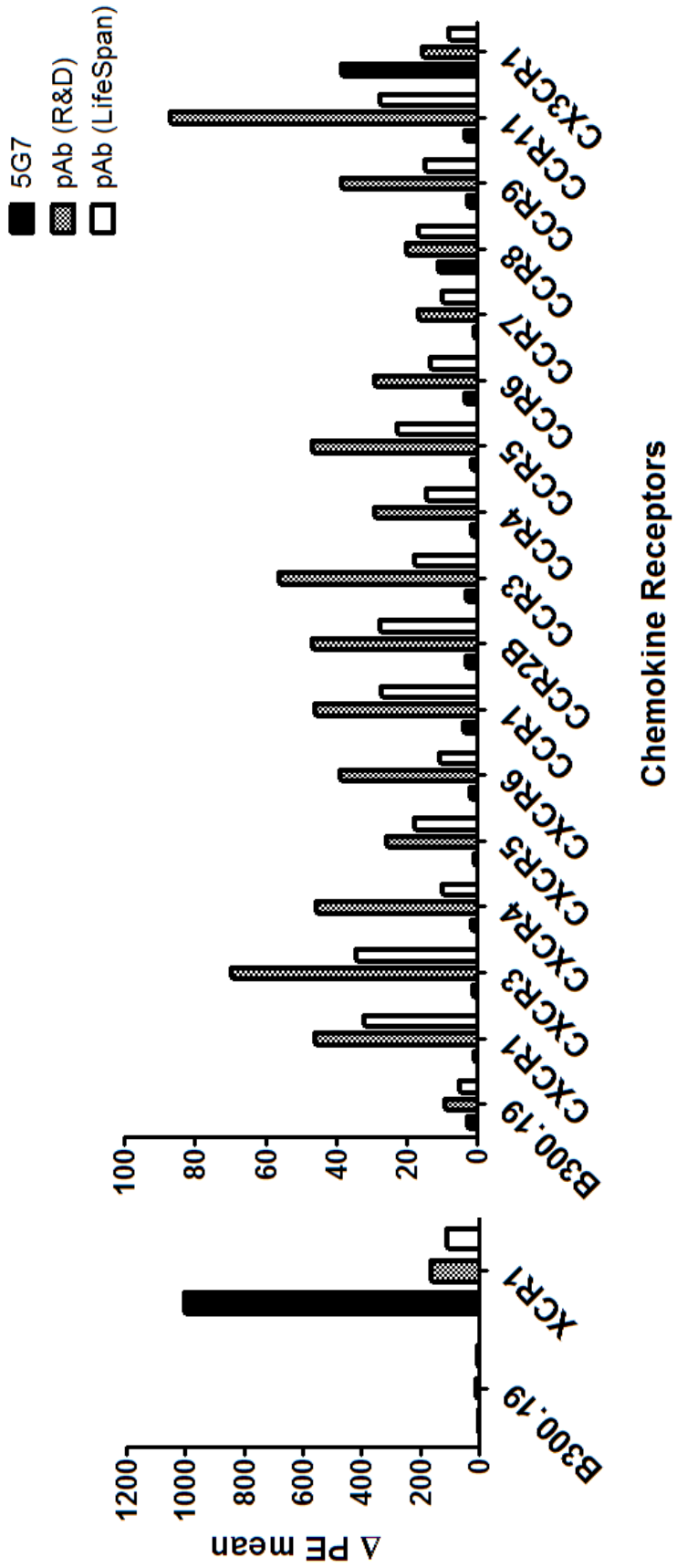
[Fig.20]


HK5L5/pAb
Relative PE mean value (mA/pAb)
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
wild
P7A
E8A
S9A
T10A
T11A
F12A
F13A
Y14A
Y15A
D16A
L17A
Q18A
S19A
Q20A
P21A
C22A
E23A
N24A
Q25A
W27A
V28A
F29A
C175A
D176A
Y177A
S178A
E179A
L180A
T181A
W182A
Y183A
L184A
wild
T185A
S186A
N-term.
2nd loop
2nd loop
*

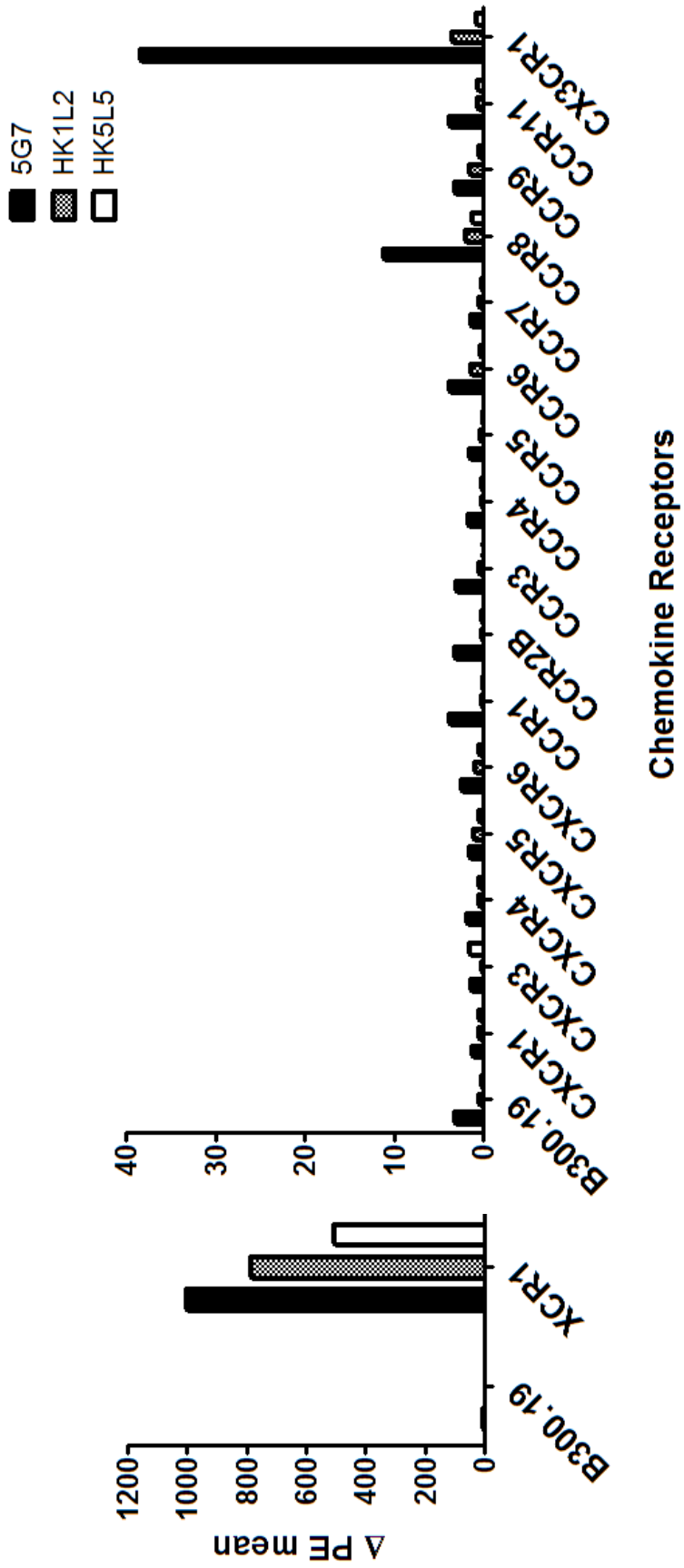
[Fig.21]


2H6
5G7
11H2
mIgG2a
mIgG2b
Fluorescence intensity (PE mean value)
0
20
40
60
80
0
1
10
Unlabeled antibodies (μg/ml)

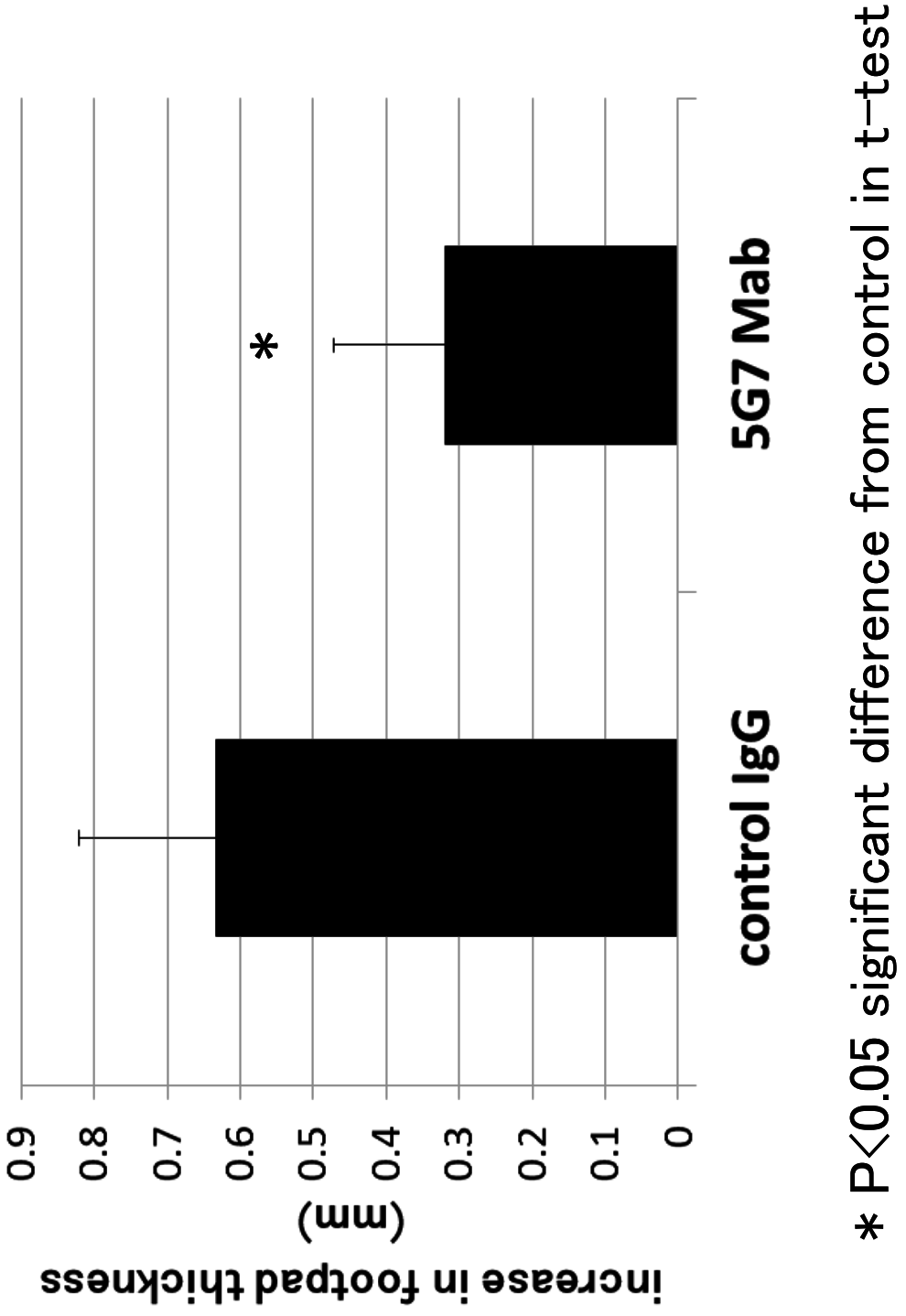
[Fig.22]


5G7
pAb (R&D)
pAb (LifeSpan)
Δ PE mean
0
200
400
600
800
1000
1200
B300.19
XCR1
0
20
40
60
80
100
B300.19
CXCR1
CXCR3
CXCR4
CXCR5
CXCR6
CCR1
CCR2B
CCR3
CCR4
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CCR6
CCR7
CCR8
CCR9
CCR11
CX3CR1
Chemokine Receptors

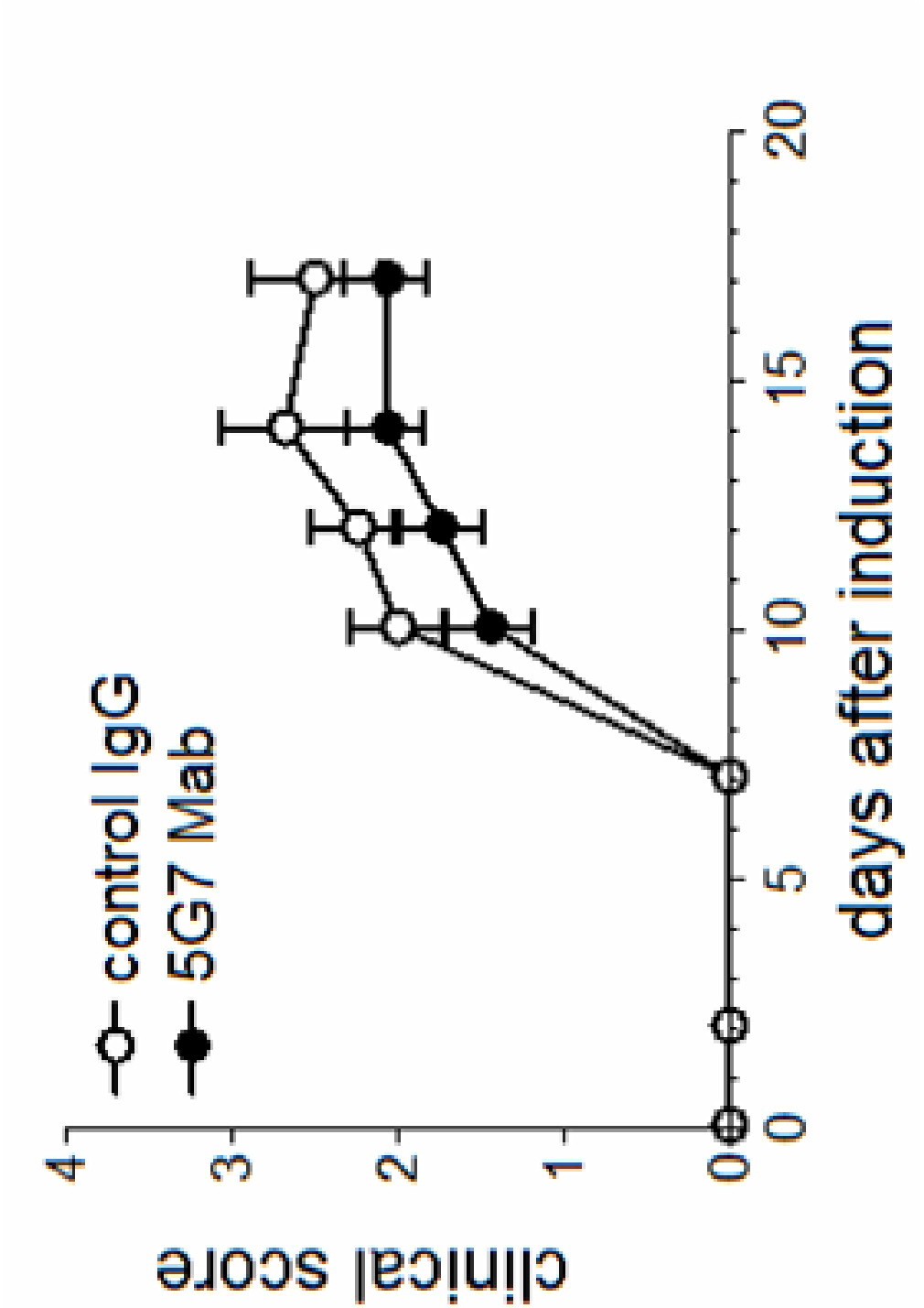
[Fig.23]


5G7
HK1L2
HK5L5
Δ PE mean
1200
1000
800
600
400
200
0
B300.19
XCR1
B300.19
40
30
20
10
0
CX3CR1
CCR11
CCR9
CCR8
CCR7
CCR6
CCR5
CCR4
CCR3
CCR2B
CCR1
CXCR6
CXCR5
CXCR4
CXCR3
CXCR1
B300.19
Chemokine Receptors

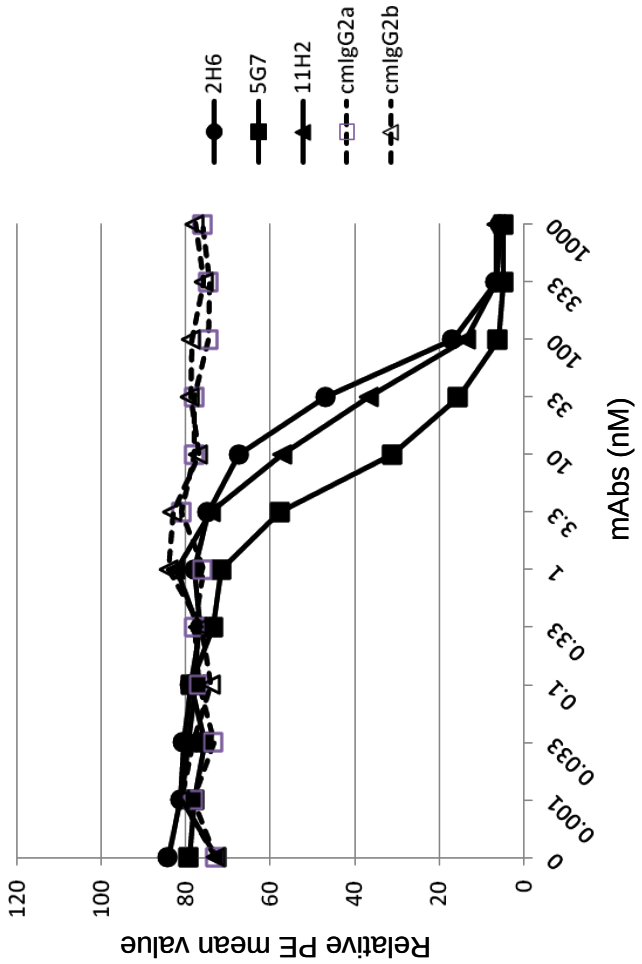
[Fig.24]

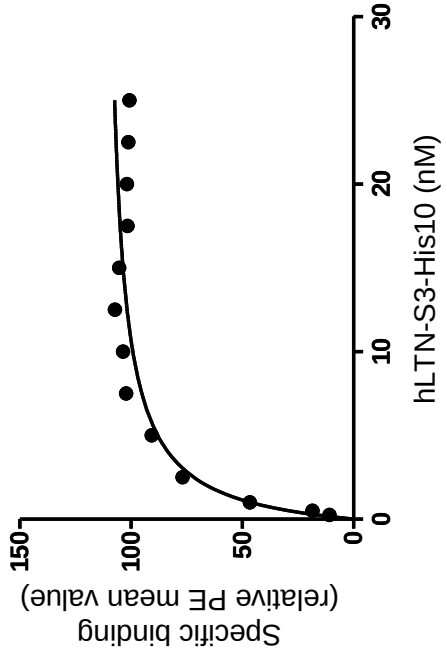

increase in footpad thickness
(mm)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
*
control IgG
5G7 Mab
* P<0.05 significant difference from control in t-test

[Fig.25]


clinical score
days after induction
control IgG
5G7 Mab
0
1
2
3
4
0
5
10
15
20

[Fig.26]


2H6
5G7
11H2
cmIgG2a
cmIgG2b
Relative PE mean value
120
100
80
60
40
20
0
0
0.001
0.033
0.1
0.33
1
3.3
10
33
100
333
1000
mAbs (nM)


Specific binding
(relative PE mean value)
150
100
50
0
0
10
20
30
hLTN-S3-His10 (nM)