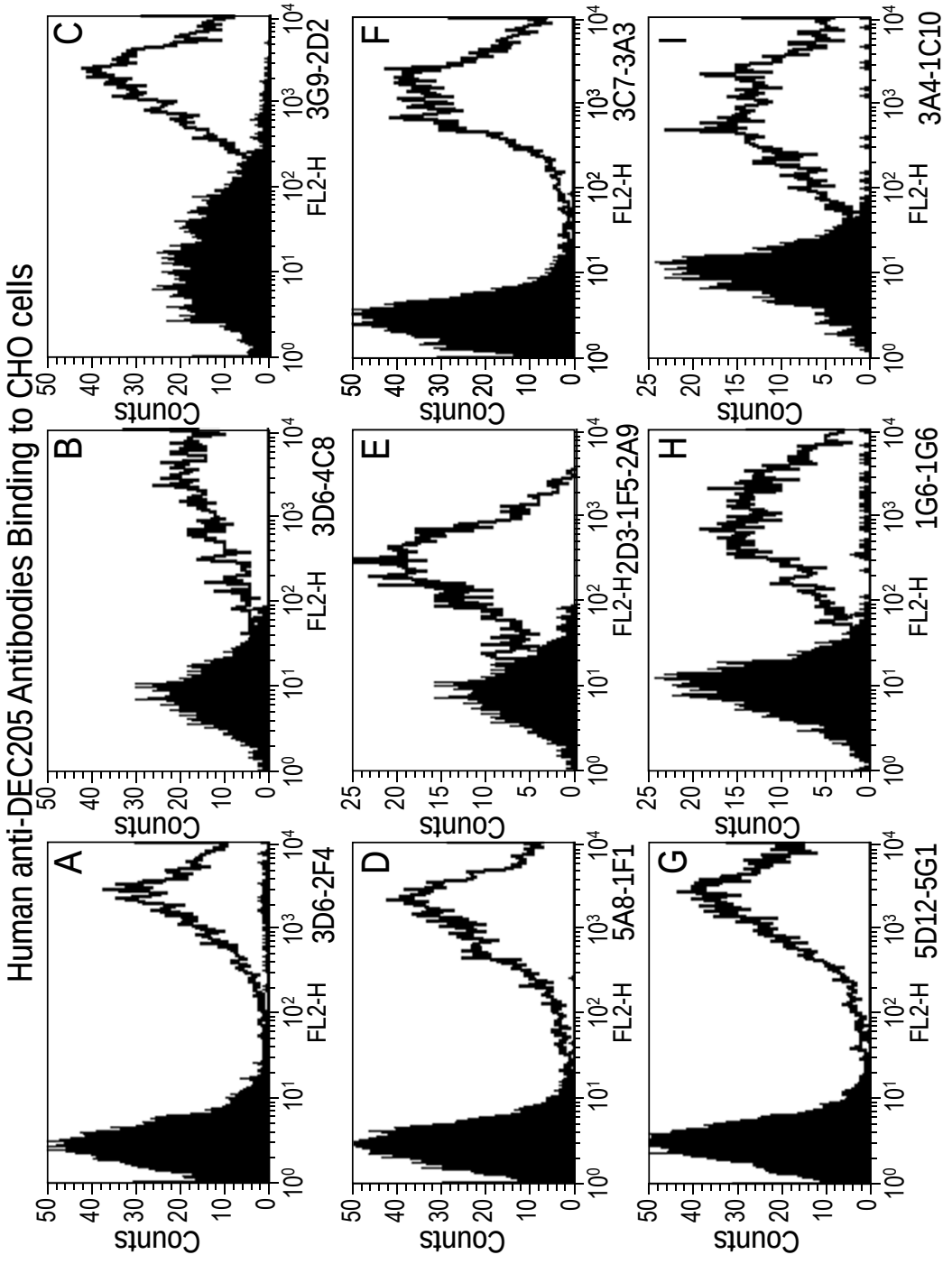

Human anti-DEC205 Antibodies Binding to CHO cells
Filled histogram = control CHO-S cells
Open histograms = CHO-S cells expressing huDEC-205
All antibodies used at saturating concentrations
A
B
C
D
E
F
G
H
I
Counts
FL2-H
3D6-2F4
3D6-4C8
3G9-2D2
5A8-1F1
2D3-1F5-2A9
3C7-3A3
5D12-5G1
1G6-1G6
3A4-1C10

Fig. 1

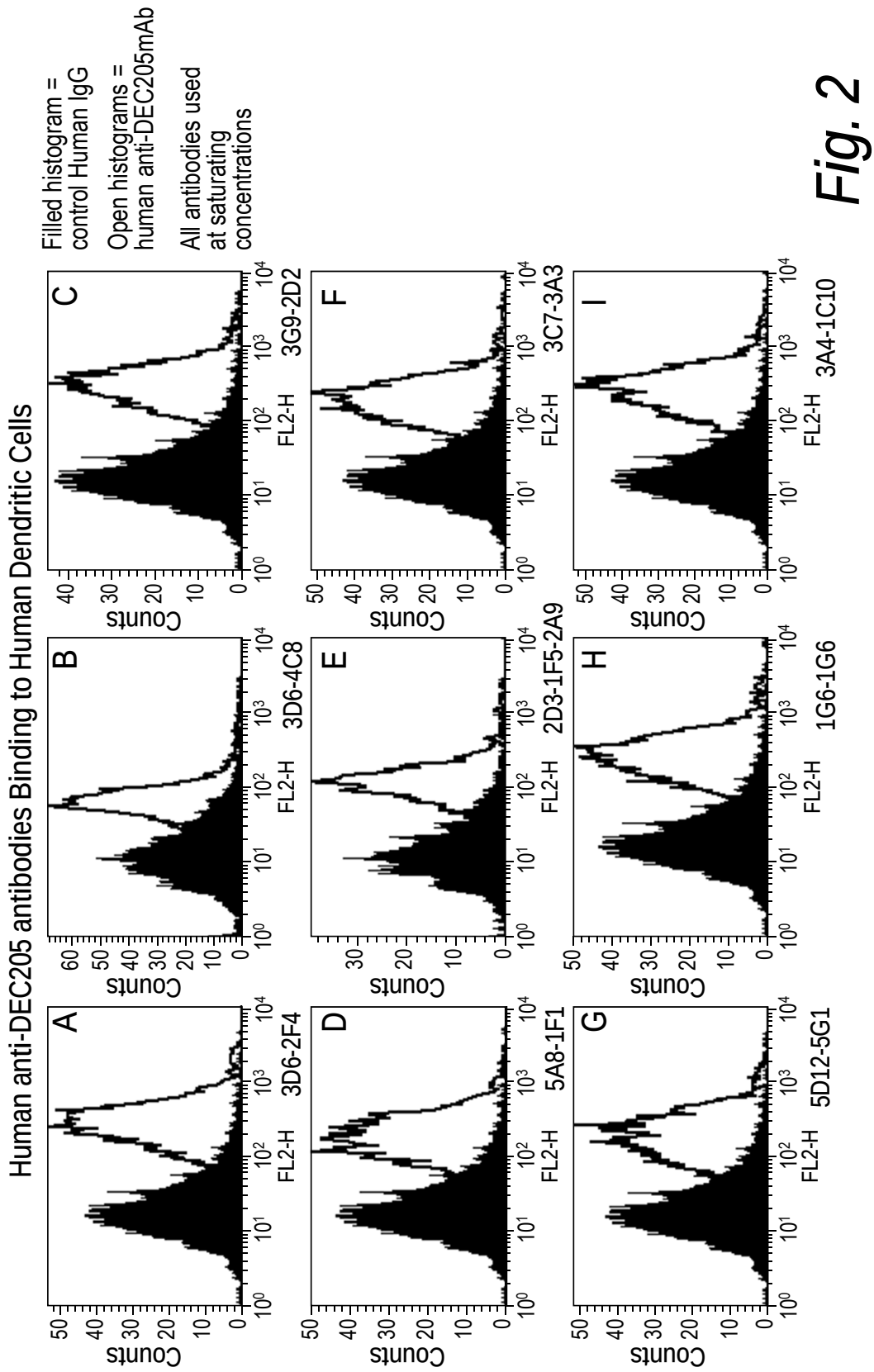

Human anti-DEC205 antibodies Binding to Human Dendritic Cells
Filled histogram = control Human IgG
Open histograms = human anti-DEC205mAb
All antibodies used at saturating concentrations
A
B
C
D
E
F
G
H
I
Counts
FL2-H
5D12-5G1
3D6-2F4
5A8-1F1
3D6-4C8
2D3-1F5-2A9
1G6-1G6
3G9-2D2
3C7-3A3
3A4-1C10

Fig. 2

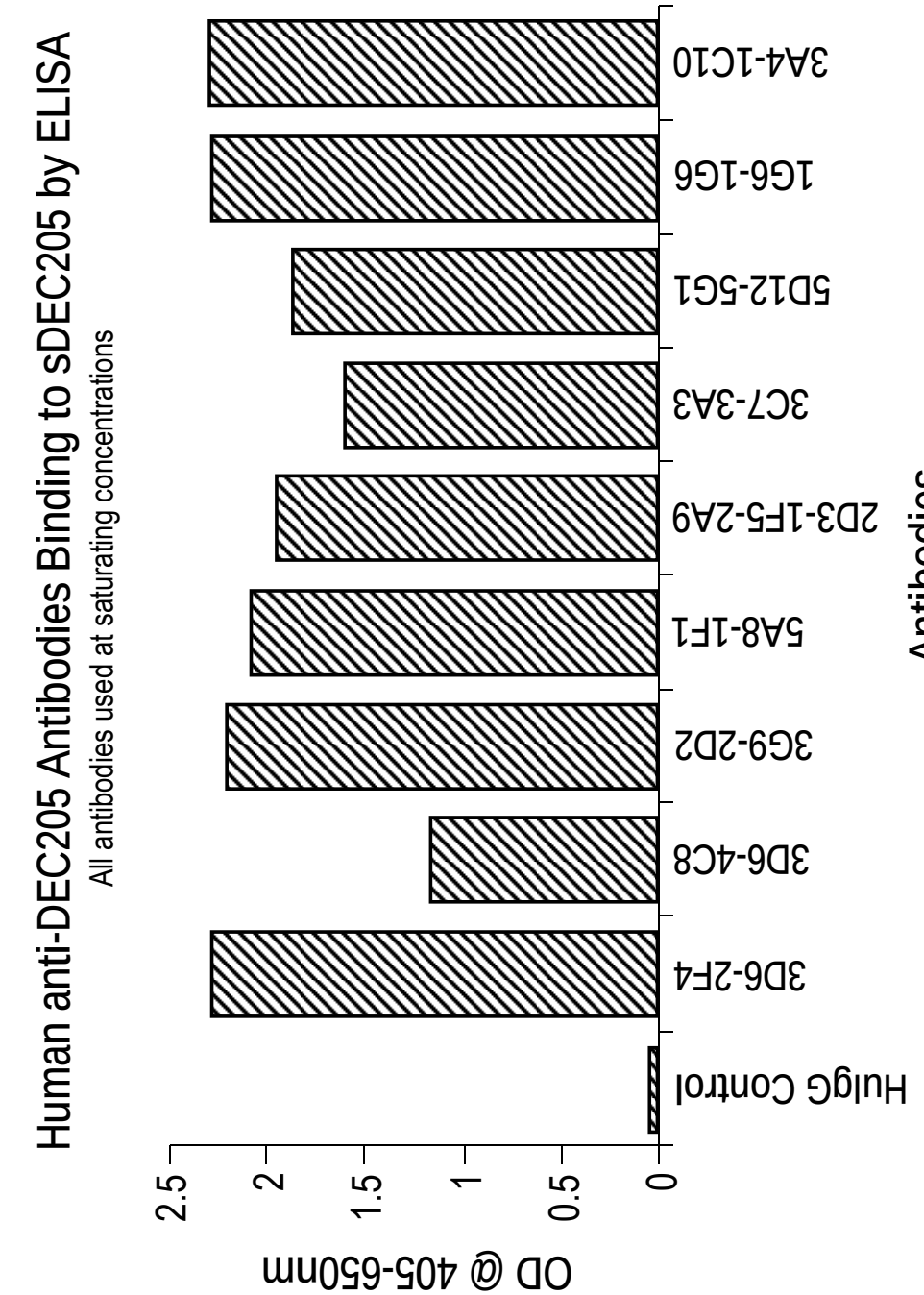
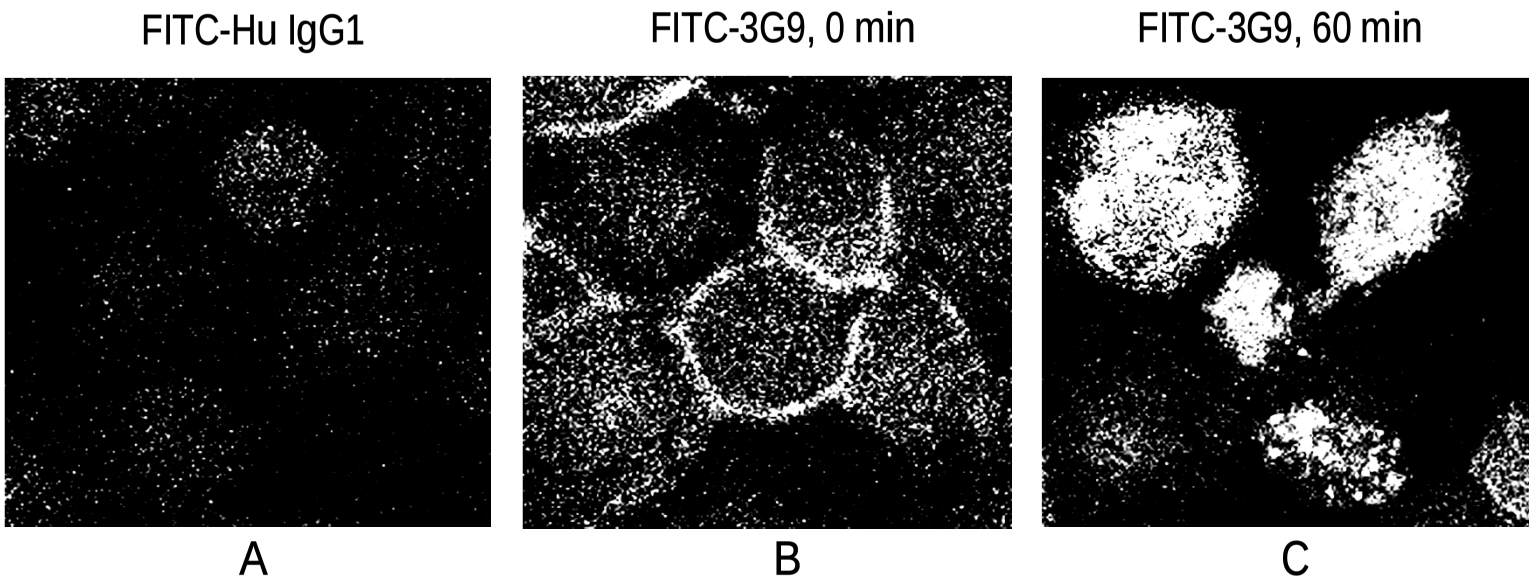

Human anti-DEC205 Antibodies Binding to sDEC205 by ELISA
All antibodies used at saturating concentrations
OD @ 405-650nm
2.5
2
1.5
1
0.5
0
HuIgG Control
3D6-2F4
3D6-4C8
3G9-2D2
5A8-1F1
2D3-1F5-2A9
3C7-3A3
5D12-5G1
1G6-1G6
3A4-1C10
Antibodies

Fig. 3

Dec205 mAb Binding and Internalization in Dendritic Cells

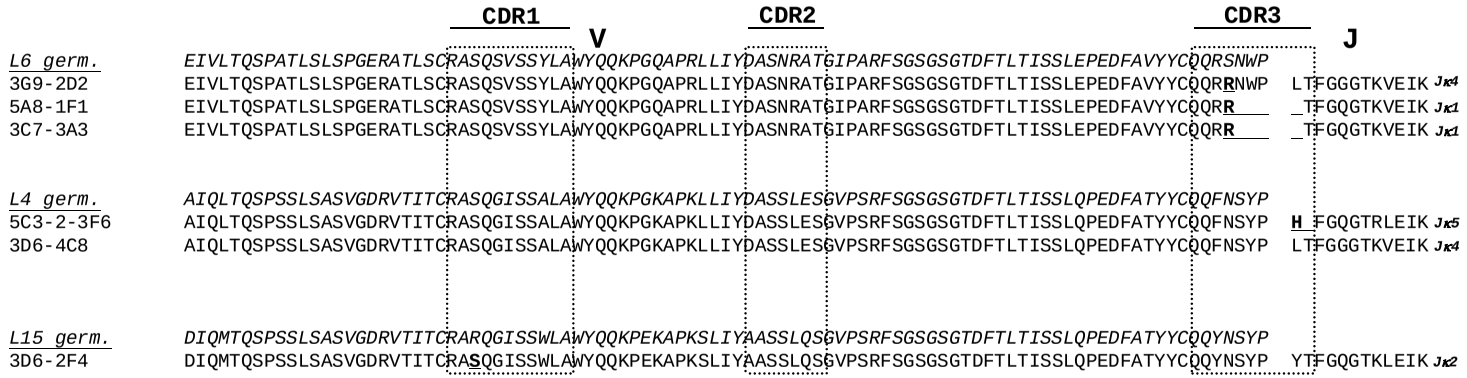


Monocyte-derived human DCs were pulsed with FITC-3G9-2D2 or FITC-human IgG1 for 30 minutes on ice. Cells were then incubated at 37°C for the indicated periods to allow for internalization. Images were captured by confocal microscopy, and green staining revealed the presence of FITC-labeled molecules.

Fig. 4

Human V_H and V_K Alignments and Germline Sequences

Vκ Alignments



VH Alignments

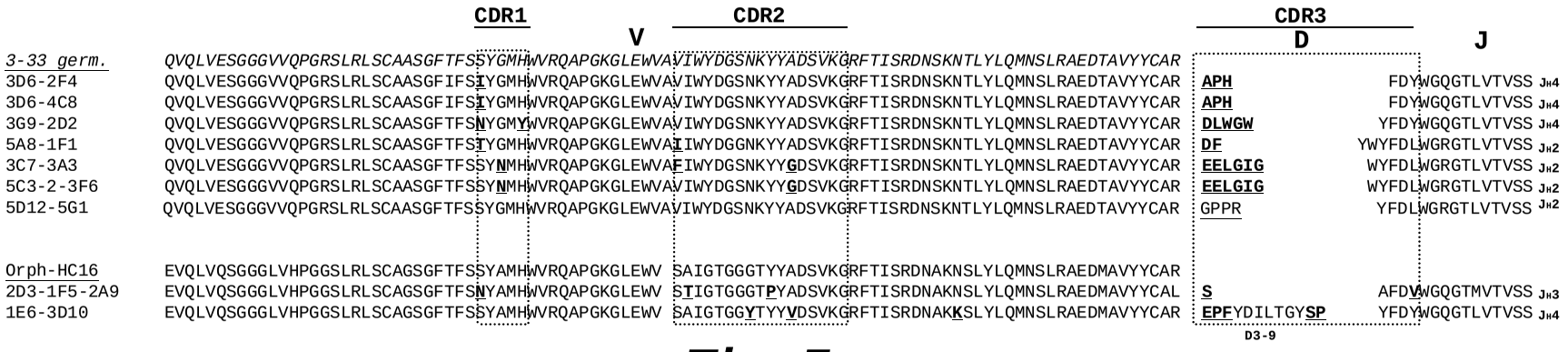


Fig. 5

Human V_H CDR Consensus Sequences

3D6-2F4 VH CDR1 (SEQ ID NO:5): IYGMH
3D6-4C8 VH CDR1 (SEQ ID NO:17): IYGMH
3G9-2D2 VH CDR1 (SEQ ID NO: 29): NYGMY
5A8-1F1 VH CDR1 (SEQ ID NO: 41): TYGMH
3C7-3A3, VH CDR1 (SEQ ID NO: 53): SYNMH
2D3-1F5-2A9, VH CDR1 (SEQ ID NO: 65): NYAMH
1E6-3D10 VH CDR1: (SEQ ID NO: 71): SYAMH
5C3-2-3F6 VH CDR1 (SEQ ID NO: 77): SYNMH
5D12-5G1 VH CDR1 (SEQ ID NO: 89): SYGMH

VH CDR1 CONSENSUS (SEQ ID NO: 97): (I,N,T,S) Y (G,N,A) M (H,Y)

3D6-2F4 VH CDR2 (SEQ ID NO: 6): VIWYDGSNKYYADSVKG
3D6-4C8 VH CDR2 (SEQ ID NO: 18): VIWYDGSNKYYADSVKG
3G9-2D2, VH CDR2 (SEQ ID NO: 30): VIWYDGSNKYYADSVKG
5A8-1F1, VH CDR2 (SEQ ID NO: 42): IIWYDGGNKYYADSVKG
3C7-3A3, VH CDR2 (SEQ ID NO: 54): FIWYDGSNKYYGDSVKG
2D3-1F5-2A9, VH CDR2 (SEQ ID NO: 66): TIGTGGGTPYA-DSVKG
1E6-3D10 VH CDR2 (SEQ ID NO: 72): AIGTGGYTYYV-DSVKG
5C3-2-3F6 VH CDR2 (SEQ ID NO: 78): VIWYDGSNKYYGDSVKG
5D12-5G1 VH CDR2 (SEQ ID NO: 90): VIWYDGSNKYYADSVKG

VH CDR2 CONSENSUS (SEQ ID NO: 98): (V,I,F,T,A) I (W,G) (Y,T) (D,G) G (S,G,Y) (N,T) (K,P) Y (Y,A,V) (A,G,-) D S V K G

3D6-2F4 VH CDR3 (SEQ ID NO: 7): APHFDY
3D6-4C8 VH CDR3 (SEQ ID NO: 19): APHFDY
3G9-2D2, VH CDR3 (SEQ ID NO: 31): DLWGWYFDY
5A8-1F1, VH CDR3 (SEQ ID NO: 43): DFYWYFDL
3C7-3A3, VH CDR3 (SEQ ID NO: 55): EELGIGWYFDL
2D3-1F5-2A9, VH CDR3 (SEQ ID NO: 67): SAFDV
1E6-3D10 VH CDR3 (SEQ ID NO: 73): EPFYDILTGYSPYFDY
5C3-2-3F6 VH CDR3 (SEQ ID NO: 79): EELGIGWYFDL
5D12-5G1 VH CDR3 (SEQ ID NO: 91): GPPRYFDL

VH CDR3 (CORE) CONSENSUS (SEQ ID NO: 99): (A,G,Y,S,P,-) (P,W,S,R) (Y,A,H) F D (Y,L,V)
(Where "-" denotes option of no amino acid residue present at that position)

Fig. 6

Human V_L CDR Consensus Sequences

3D6-2F4 VL CDR1 (SEQ ID NO: 11): RASQGISSWLA
3D6-4C8 VL CDR1 (SEQ ID NO: 23): RASQGISSALA
3G9-2D2, VL CDR1 (SEQ ID NO: 35): RASQSVSSYLA
5A8-1F1, VL CDR1 (SEQ ID NO: 47): RASQSVSSYLA
3C7-3A3, VL CDR1 (SEQ ID NO: 59): RASQSVSSYLA
5C3-2-3F6 VL CDR1 (SEQ ID NO: 83): RASQGISSALA

VL CDR1 CONSENSUS (SEQ ID NO: 100): R A S Q (S,G) (I,V) S S (Y,W,A) L A

3D6-2F4 VL CDR2 (SEQ ID NO: 12): AASSLQS
3D6-4C8 VL CDR2 (SEQ ID NO: 24): DASSLES
3G9-2D2, VL CDR2 (SEQ ID NO: 36): DASNRAT
5A8-1F1, VL CDR2 (SEQ ID NO: 48): DASNRAT
3C7-3A3, VL CDR2 (SEQ ID NO: 60): DASNRAT
5C3-2-3F6 VL CDR2 (SEQ ID NO: 84): DASSLES

VL CDR2 CONSENSUS (SEQ ID NO: 101): (D,A) A S (N,S) (R,L) (A,Q,E) (T,S)

3D6-2F4 VL CDR3 (SEQ ID NO: 13): QQYNSYPYT
3D6-4C8 VL CDR3 (SEQ ID NO: 25): QQFNSYPLT
3G9-2D2, VL CDR3 (SEQ ID NO: 37): QQRRNWPLT
5A8-1F1, VL CDR3 (SEQ ID NO: 49): QQRRT----
3C7-3A3, VL CDR3 (SEQ ID NO: 61): QQRRT----
5C3-2-3F6 VL CDR3 (SEQ ID NO: 85): QQFNSYPH-

VL CDR3 CONSENSUS (SEQ ID NO: 102): Q Q (R,Y,F) (R,N) (T,S,N) (Y,W,-) (P,-) (Y,L,H,-) (T,-)

(Where "-" denotes option of no amino acid residue present at that position)

Fig. 7

Example of anti-DEC-205/antigen fusion
APC targeted vaccine construct (schematic representation)

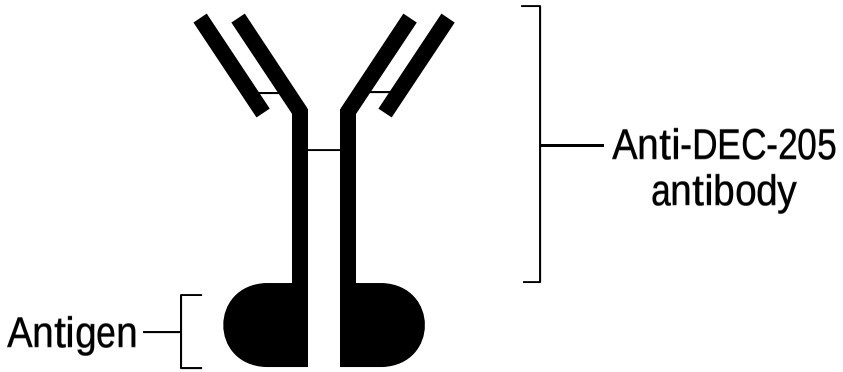


Fig. 8

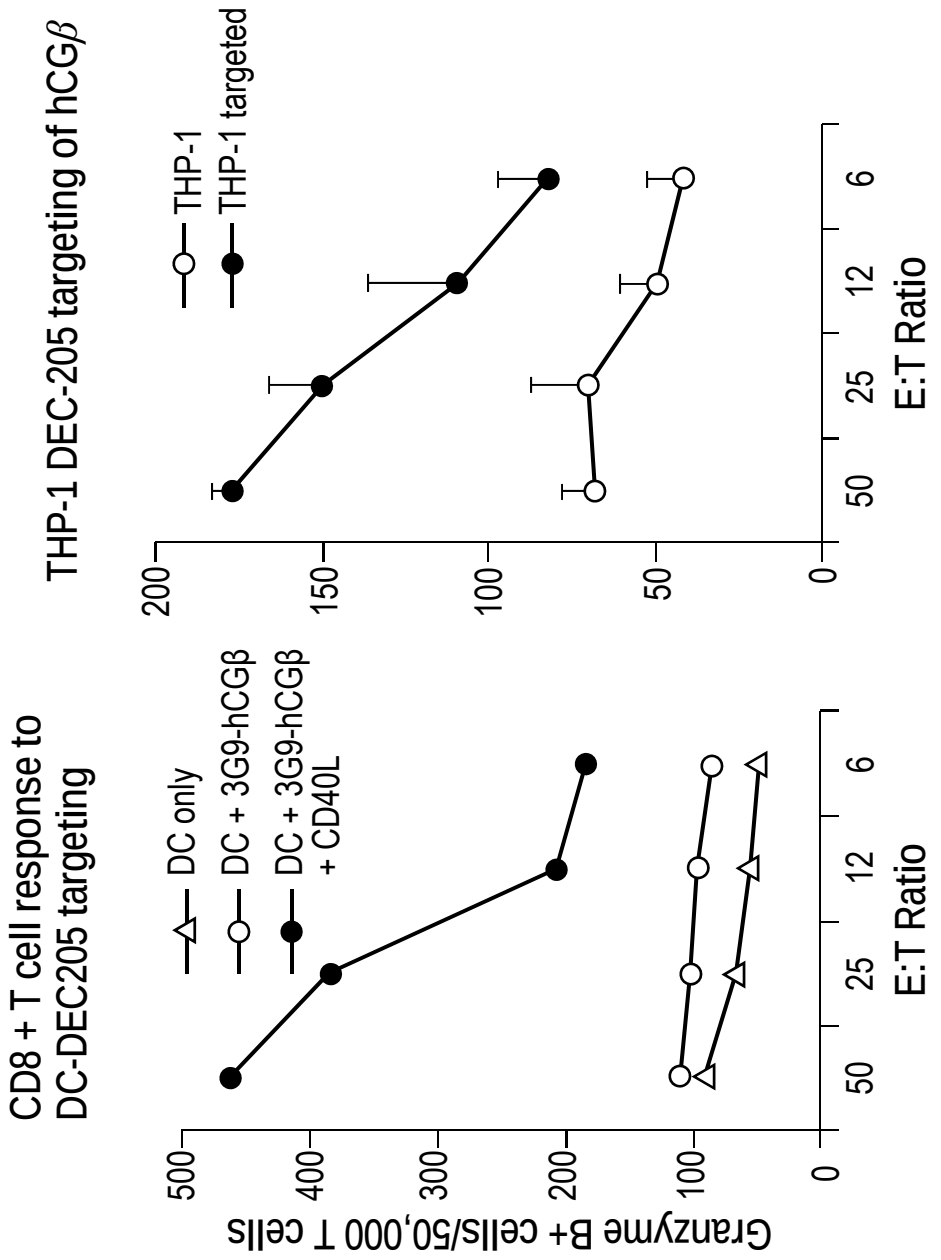

CD8 + T cell response to
DC-DEC205 targeting
DC only
DC + 3G9-hCGβ
DC + 3G9-hCGβ
+ CD40L
Granzyme B+ cells/50,000 T cells
500
400
300
200
100
0
50
25
12
6
E:T Ratio
THP-1 DEC-205 targeting of hCGβ
THP-1
THP-1 targeted
200
150
100
50
0
50
25
12
6
E:T Ratio

Fig. 9A

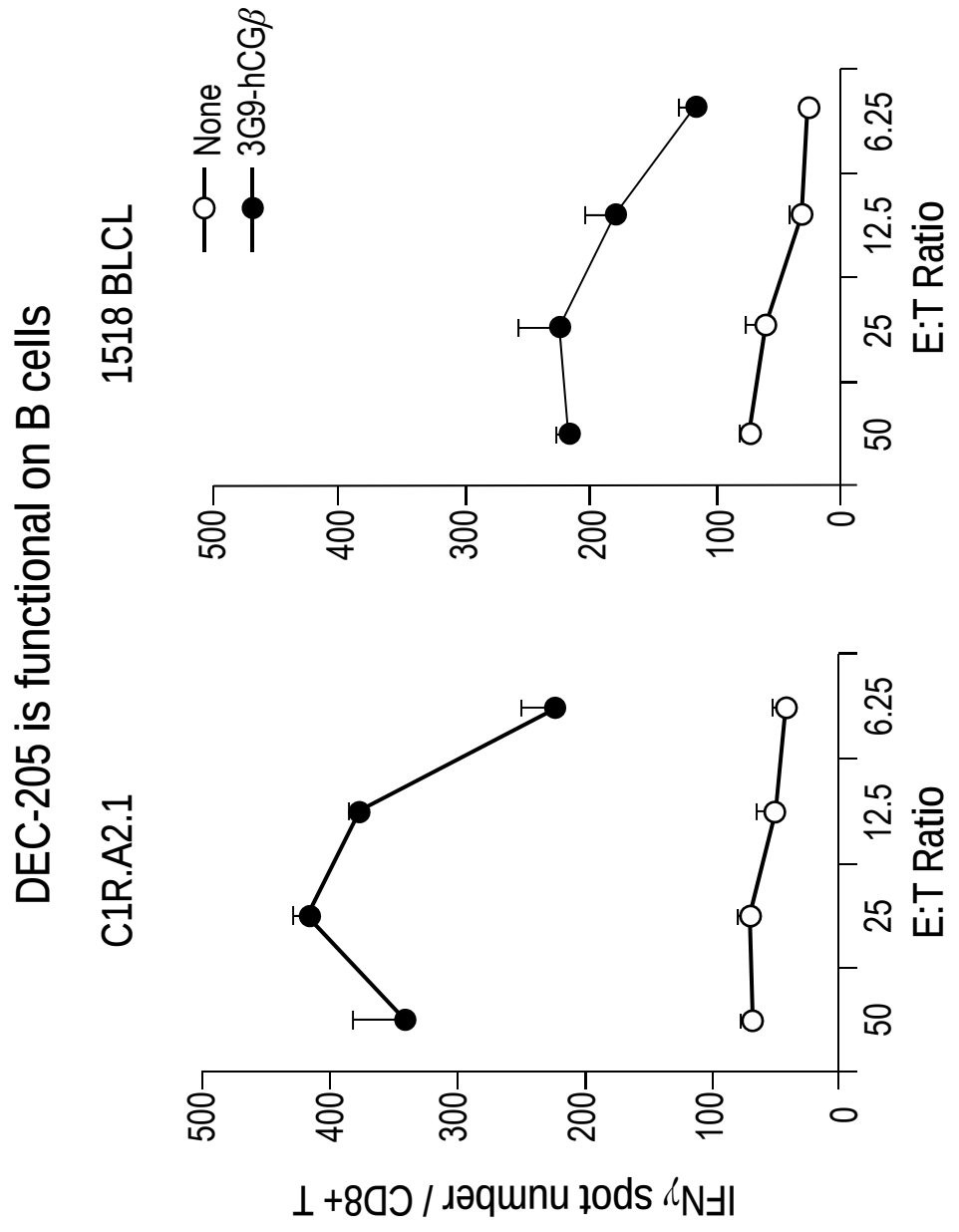

DEC-205 is functional on B cells
C1R.A2.1
1518 BLCL
None
3G9-hCGβ
IFNγ spot number / CD8+ T
500
400
300
200
100
0
50
25
12.5
6.25
E:T Ratio

Fig. 9B