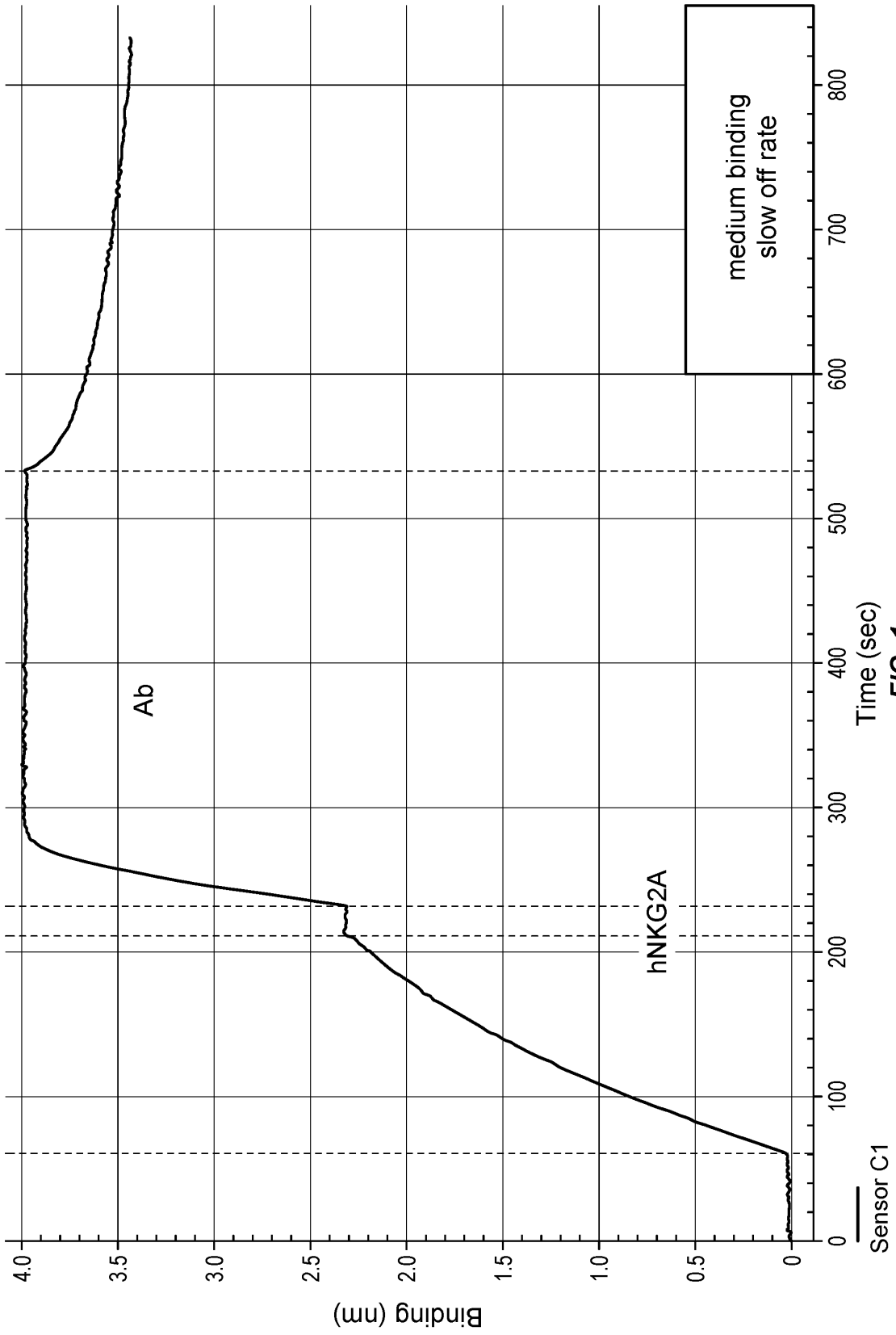

medium binding
slow off rate
Ab
hNKG2A
Binding (nm)
Time (sec)
Sensor C1
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
100
200
300
400
500
600
700
800

FIG. 1

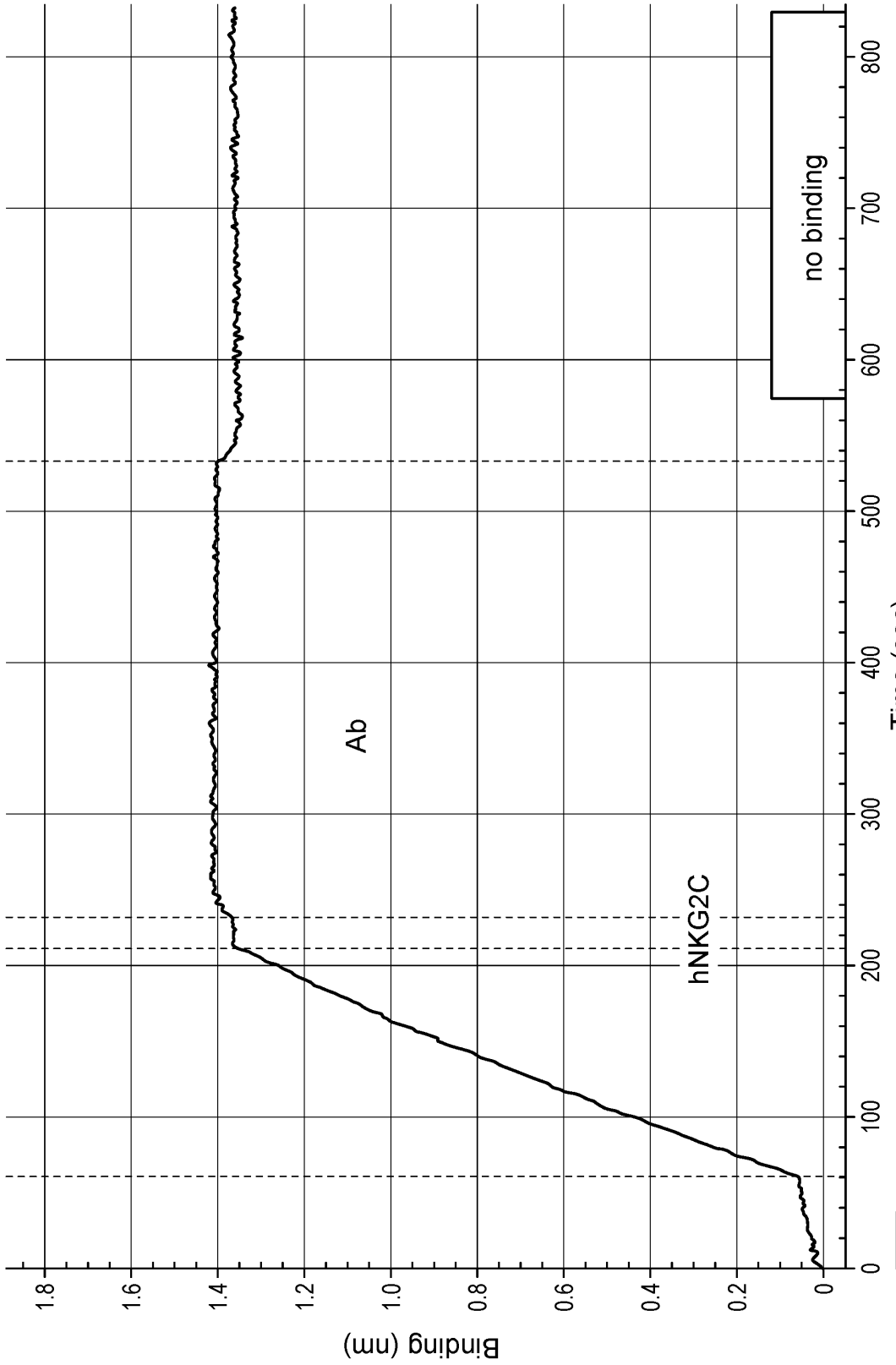

Binding (nm)
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
0
100
200
300
400
500
600
700
800
Time (sec)
Sensor C5
hNKG2C
Ab
no binding

FIG. 1 (cont.)

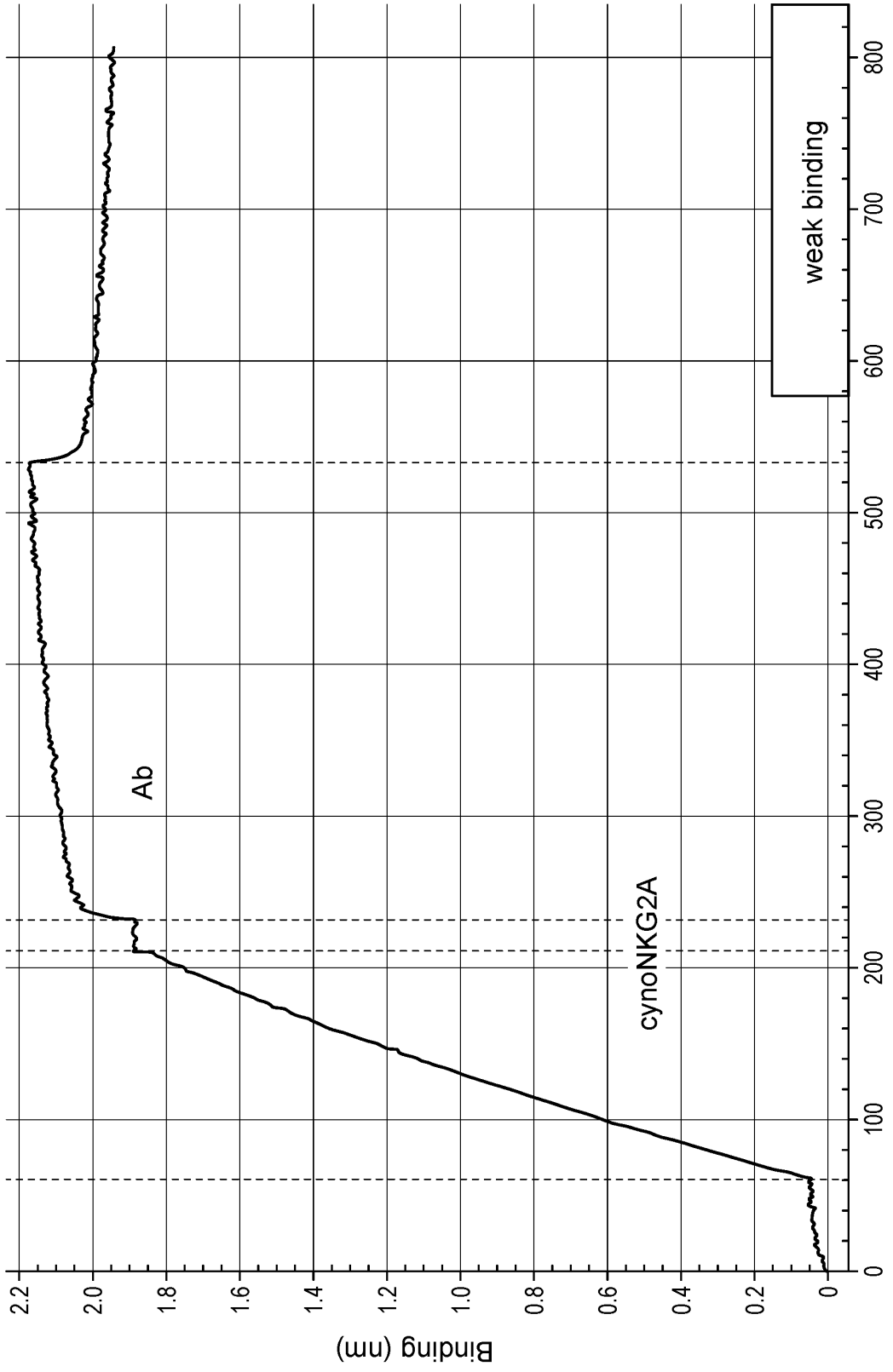

Binding (nm)
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
Time (sec)
0
100
200
300
400
500
600
700
800
Sensor C9
Ab
cynoNKG2A
weak binding

FIG. 1 (cont.)

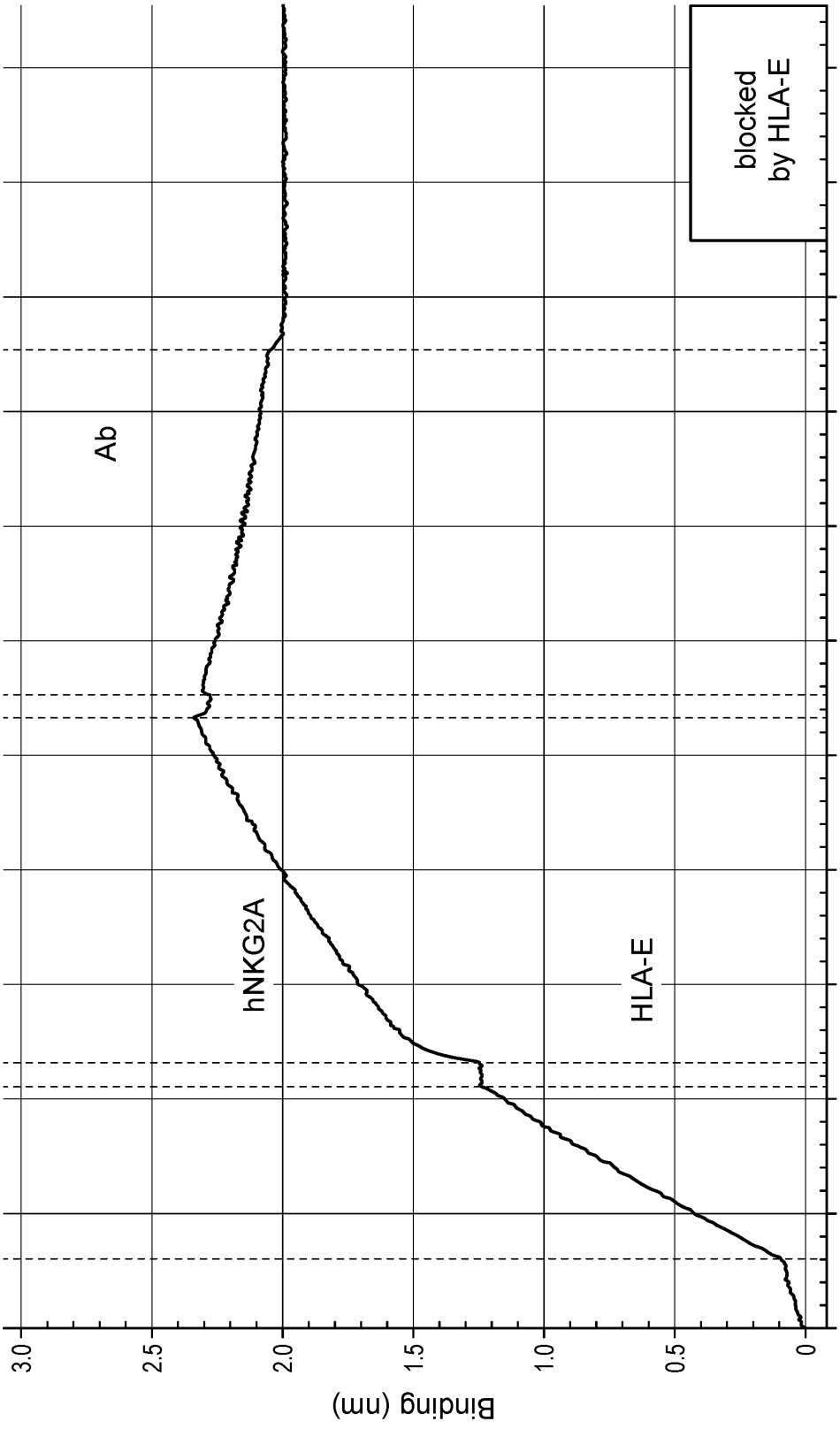
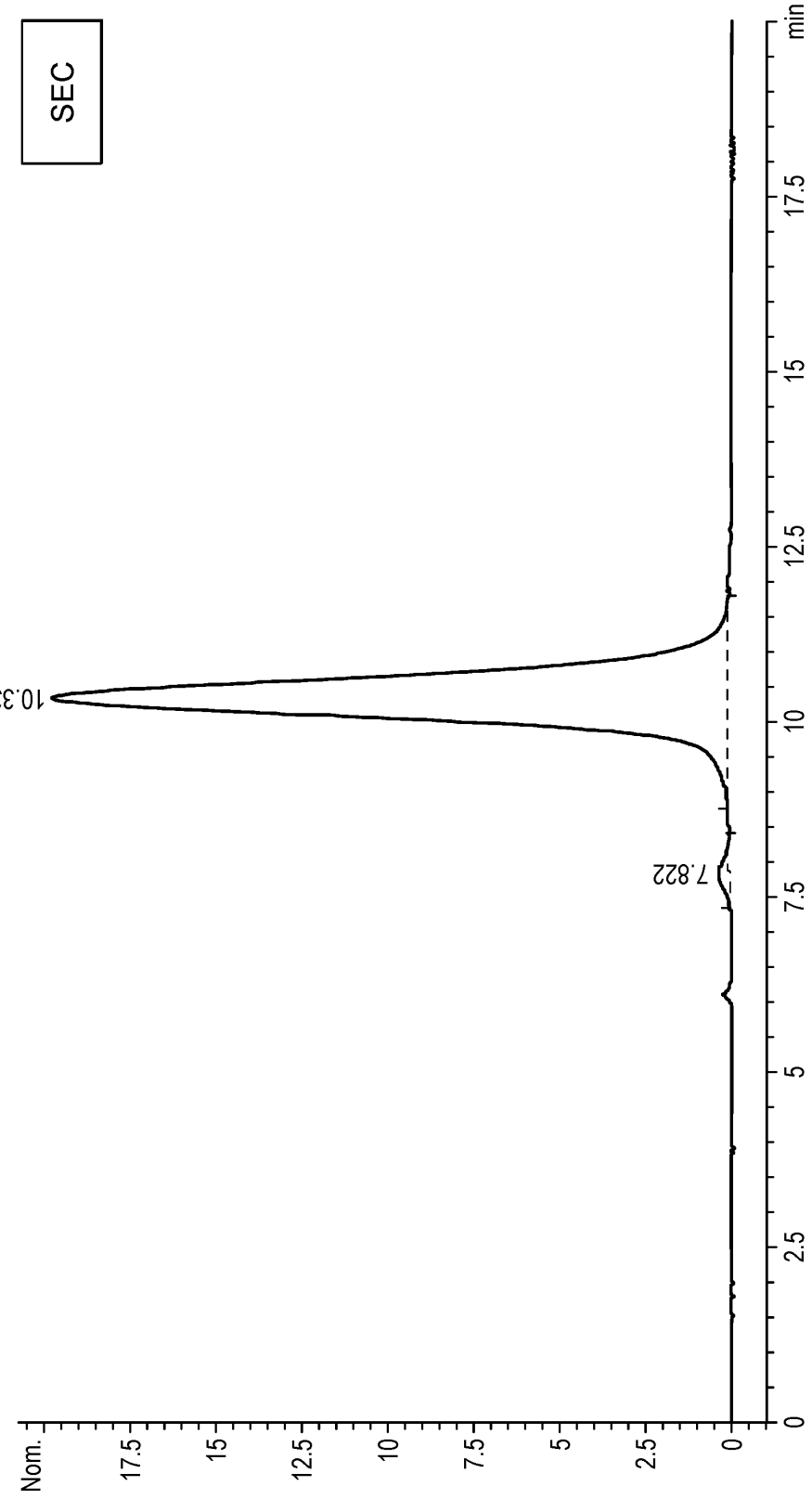
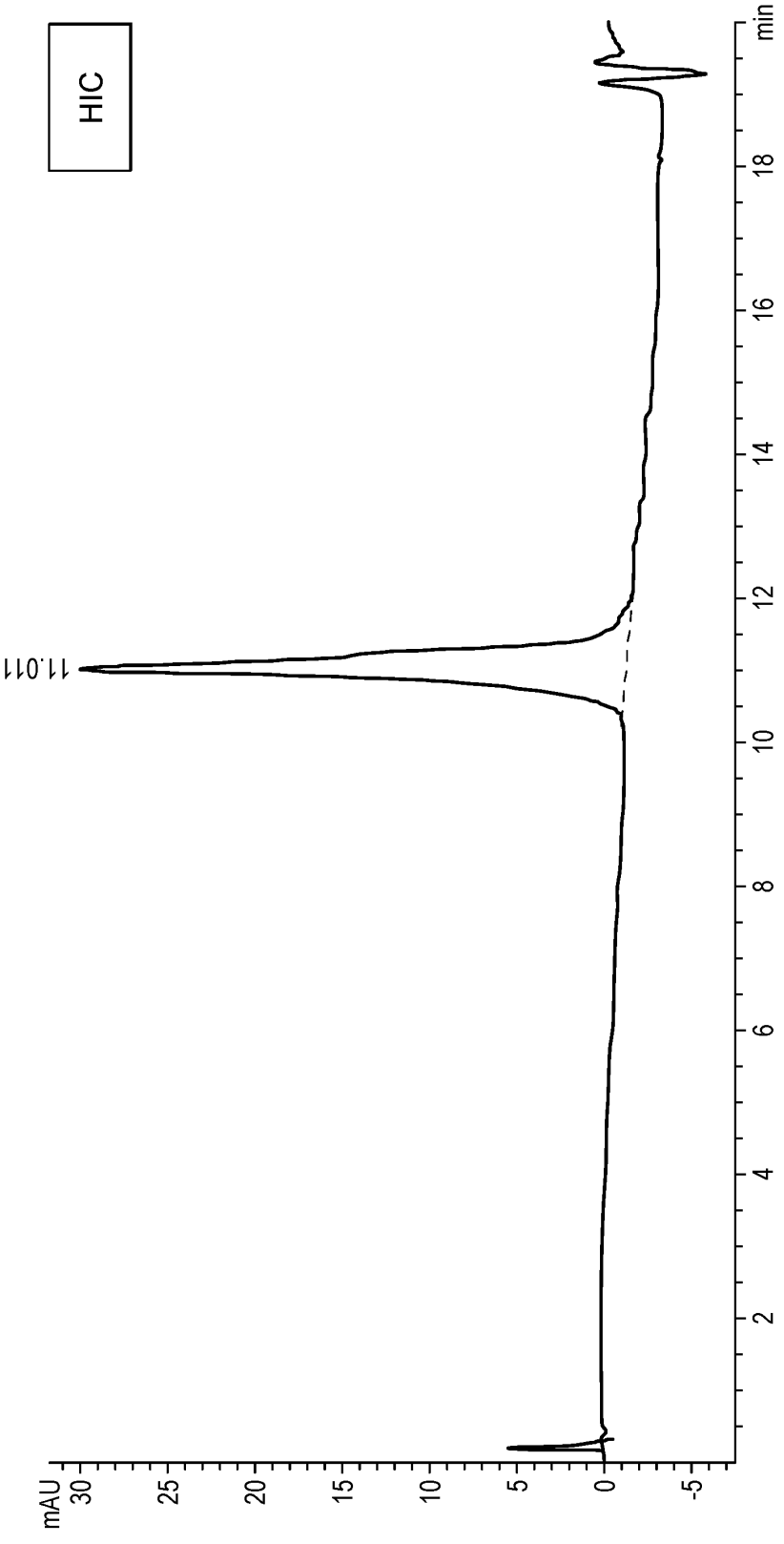

Binding (nm)
3.0
2.5
2.0
1.5
1.0
0.5
0
0
100
200
300
400
500
600
700
800
900
1000
1100
Time (sec)
Sensor E4
Ab
hNKG2A
HLA-E
blocked
by HLA-E

FIG. 2



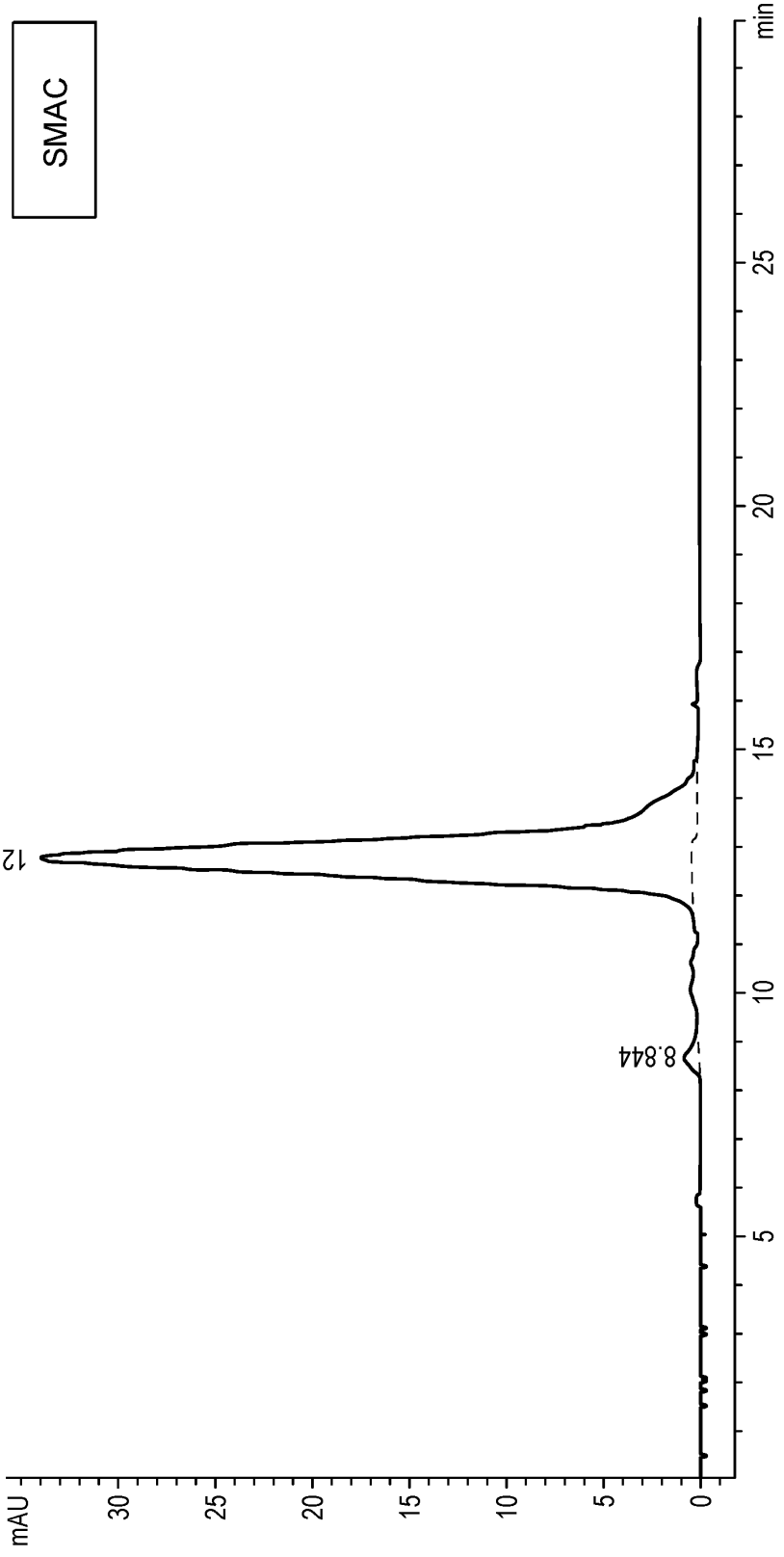
#	Time	Area	Height	Width	Symmetry
1	7.822	8.8	3.1E-1	0.3597	0.997
2	10.333	805.3	19.7	0.6248	0.915

FIG. 3A



#	Time	Area	Height	Width	Area%	Symmetry
1	11.011	719.5	31.3	0.3126	100.000	0.767

FIG. 3B



#	Time	Area	Height	Width	Area%	Symmetry
1	8.844	24.7	7.8E-1	0.4893	1.373	1.04
2	12.751	1773.2	33.7	0.7815	98.627	0.885

FIG. 3C

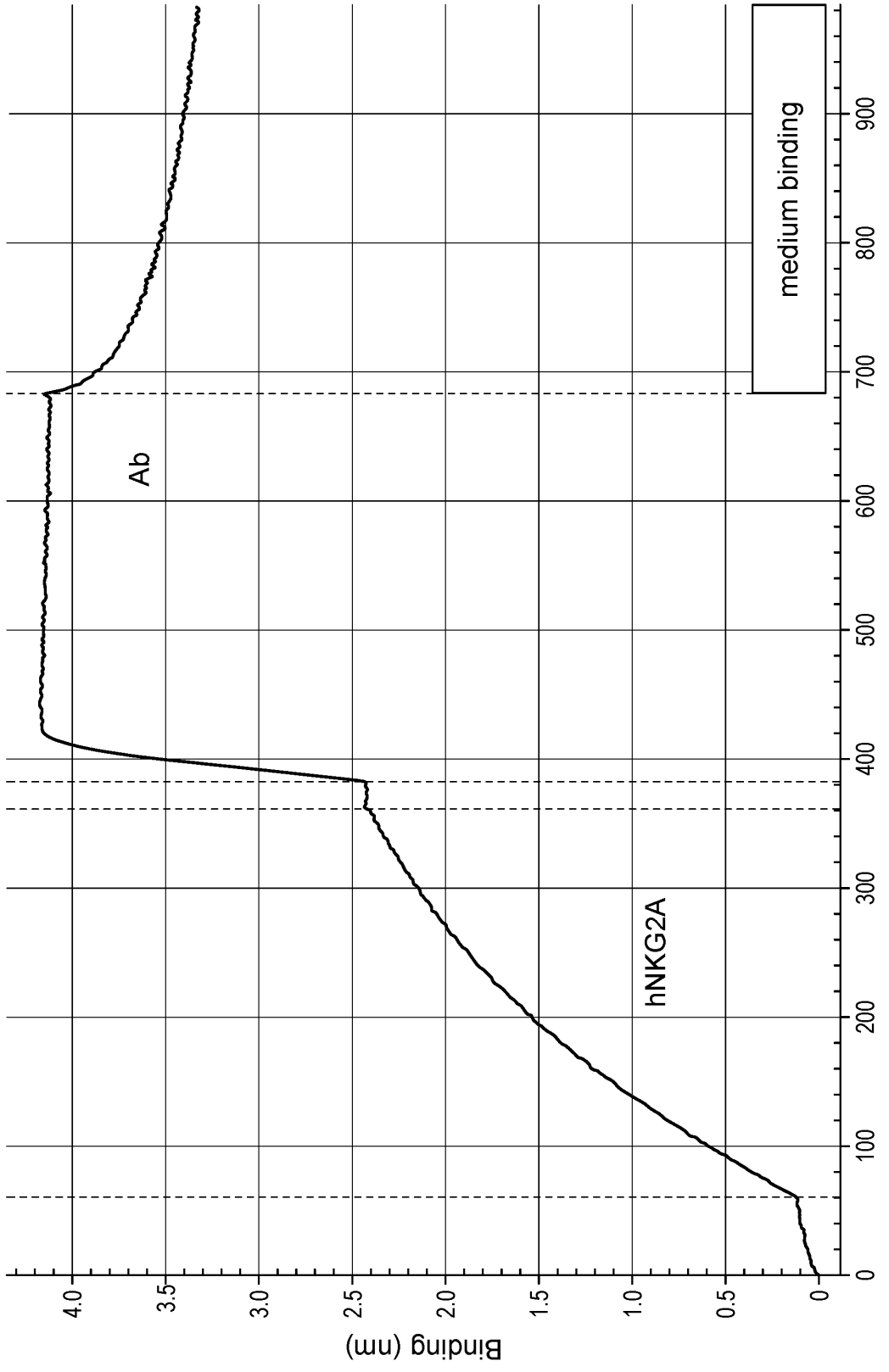

Binding (nm)
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
Time (sec)
0
100
200
300
400
500
600
700
800
900
Sensor C4
Ab
hNKG2A
medium binding

FIG. 4

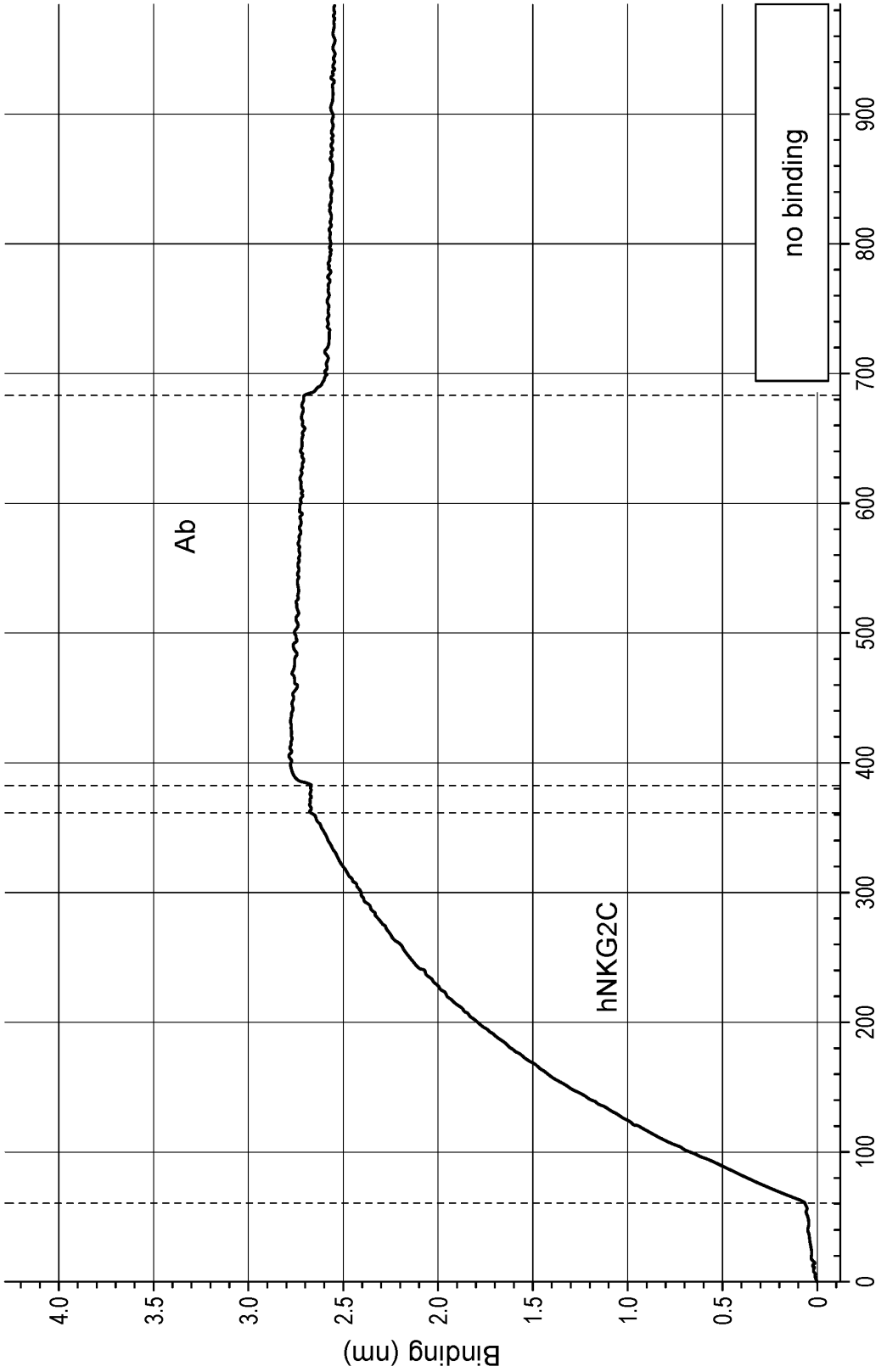

Binding (nm)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0
0
100
200
300
400
500
600
700
800
900
Time (sec)
Sensor C8
Ab
hNKG2C
no binding

FIG. 4 (cont.)

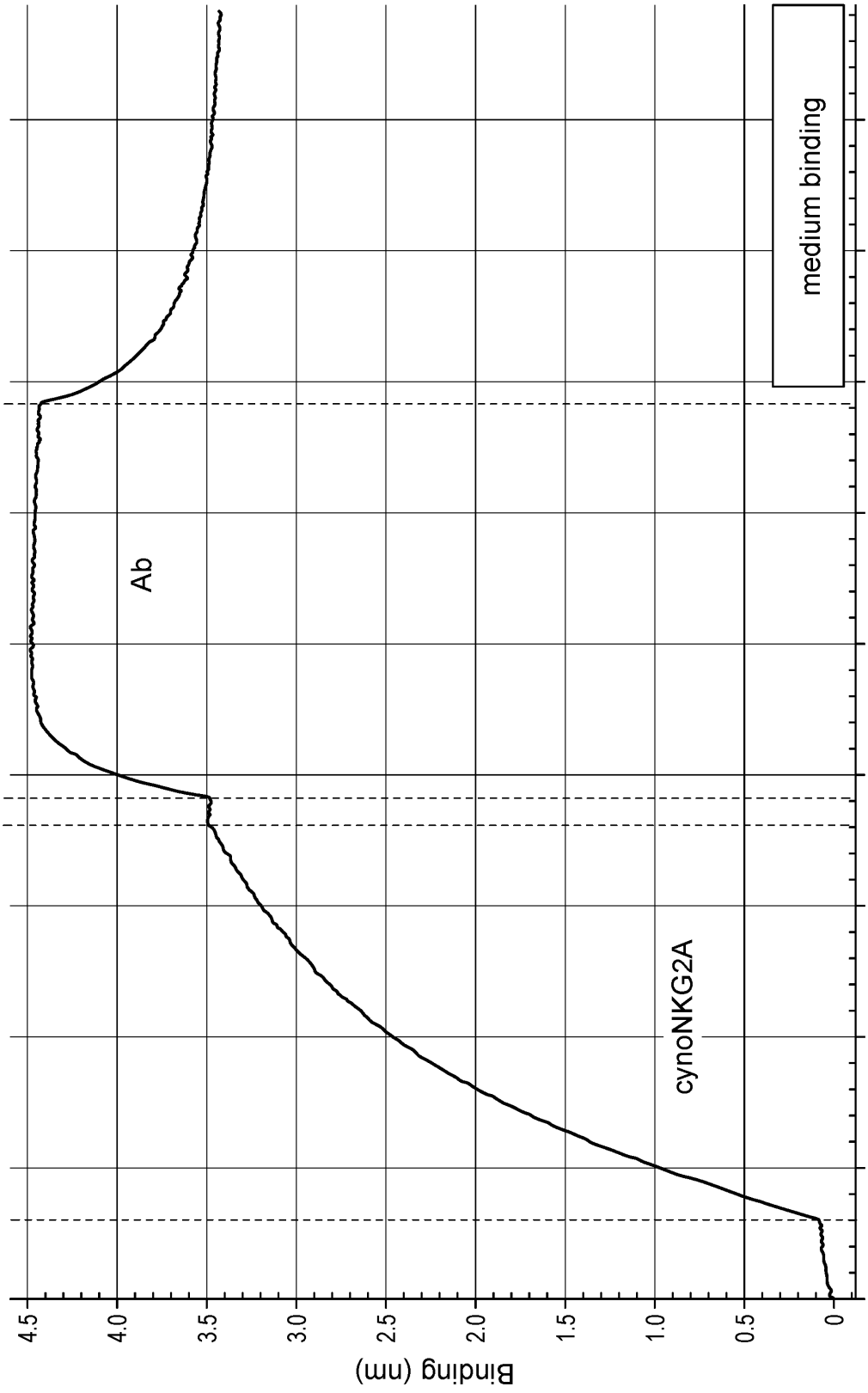

Binding (nm)
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0
0
100
200
300
400
500
600
700
800
900
Time (sec)
Sensor C2
Ab
cynoNKG2A
medium binding

FIG. 4 (cont.)

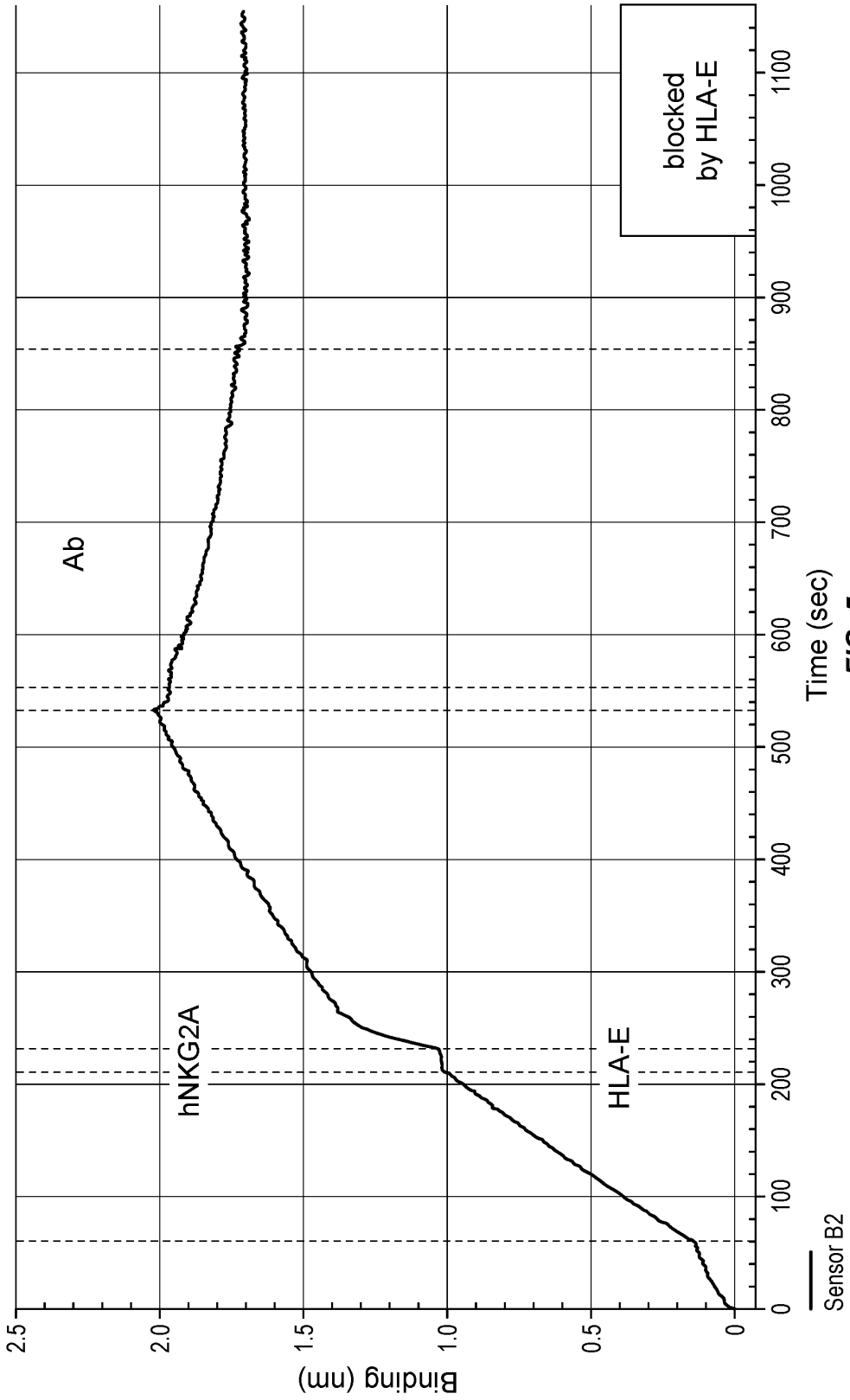

Binding (nm)
2.5
2.0
1.5
1.0
0.5
0
0
100
200
300
400
500
600
700
800
900
1000
1100
Time (sec)
Sensor B2
hNKG2A
HLA-E
Ab
blocked
by HLA-E

FIG. 5

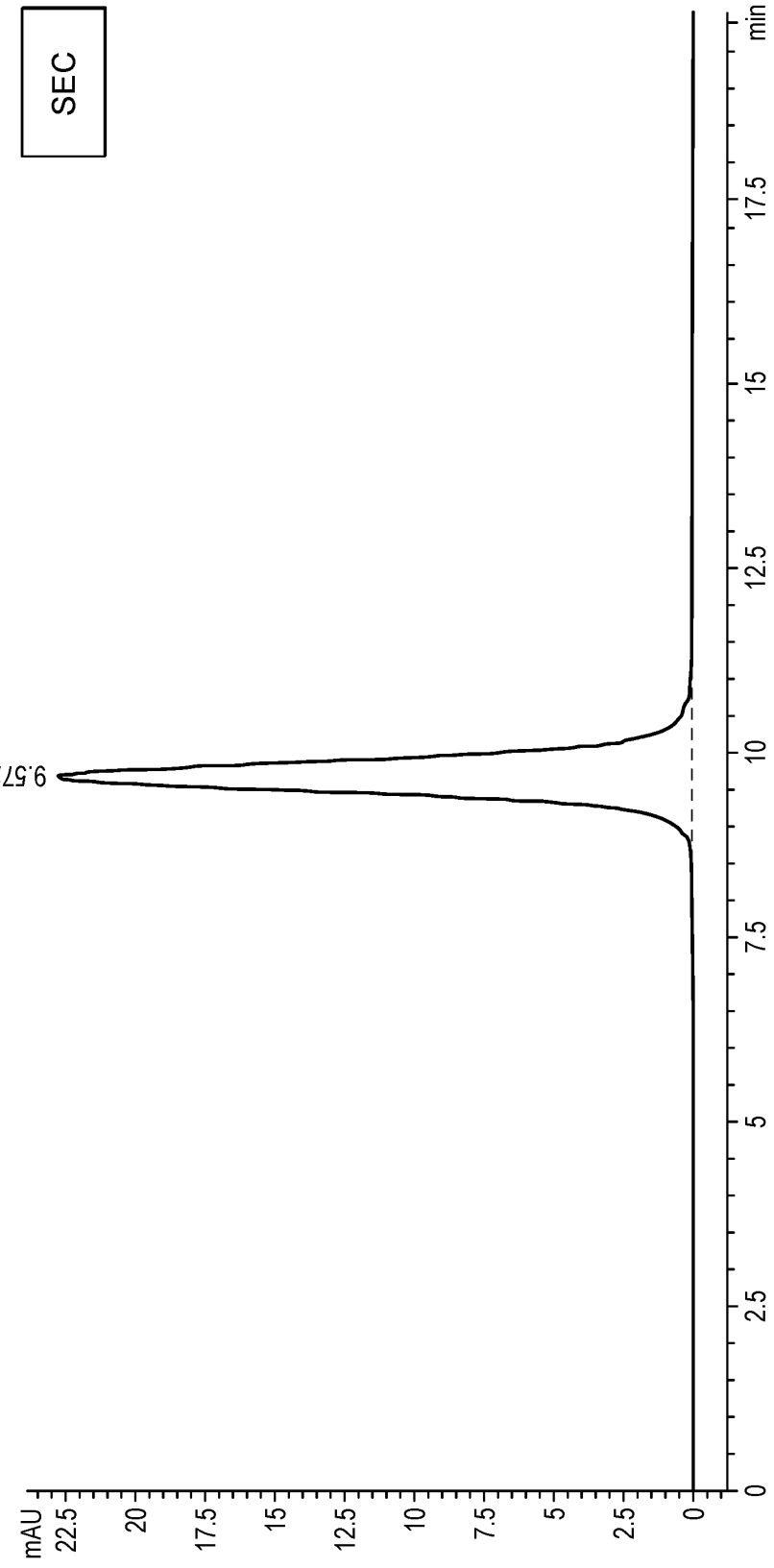
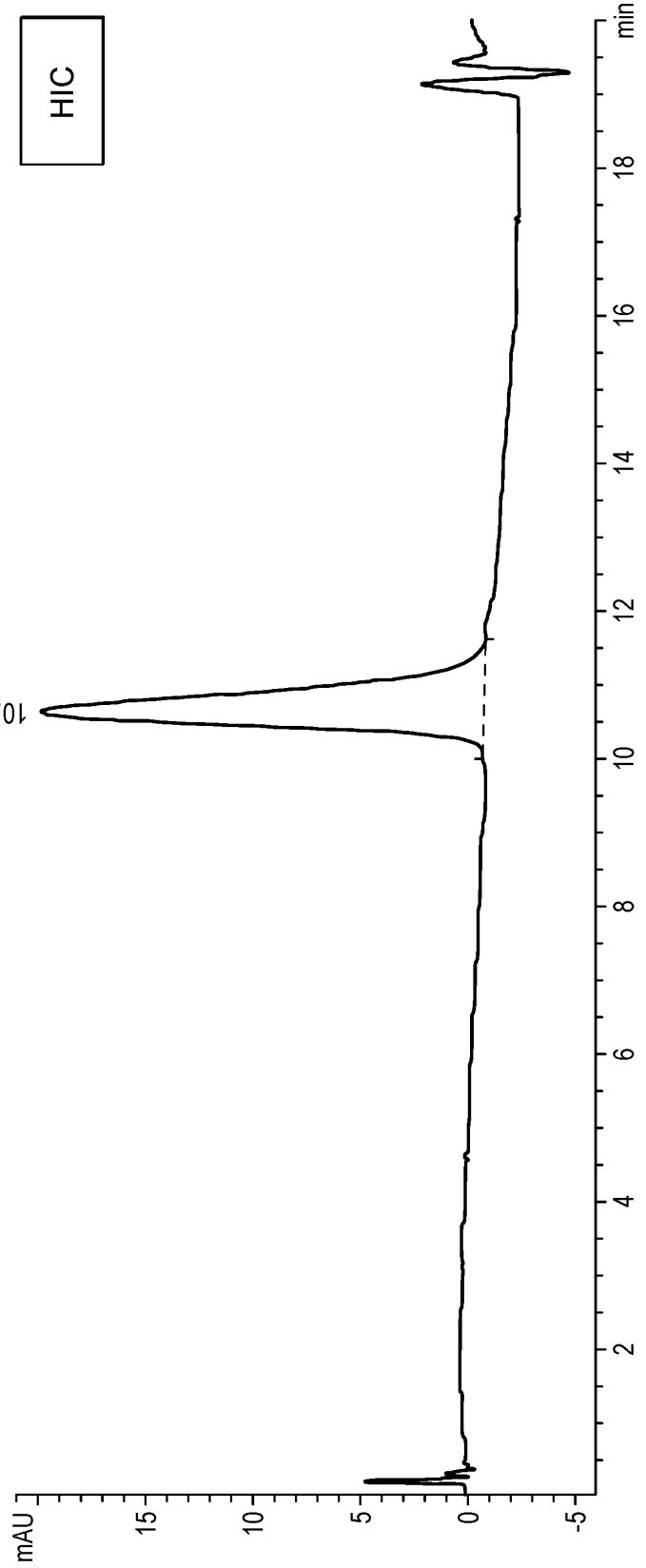
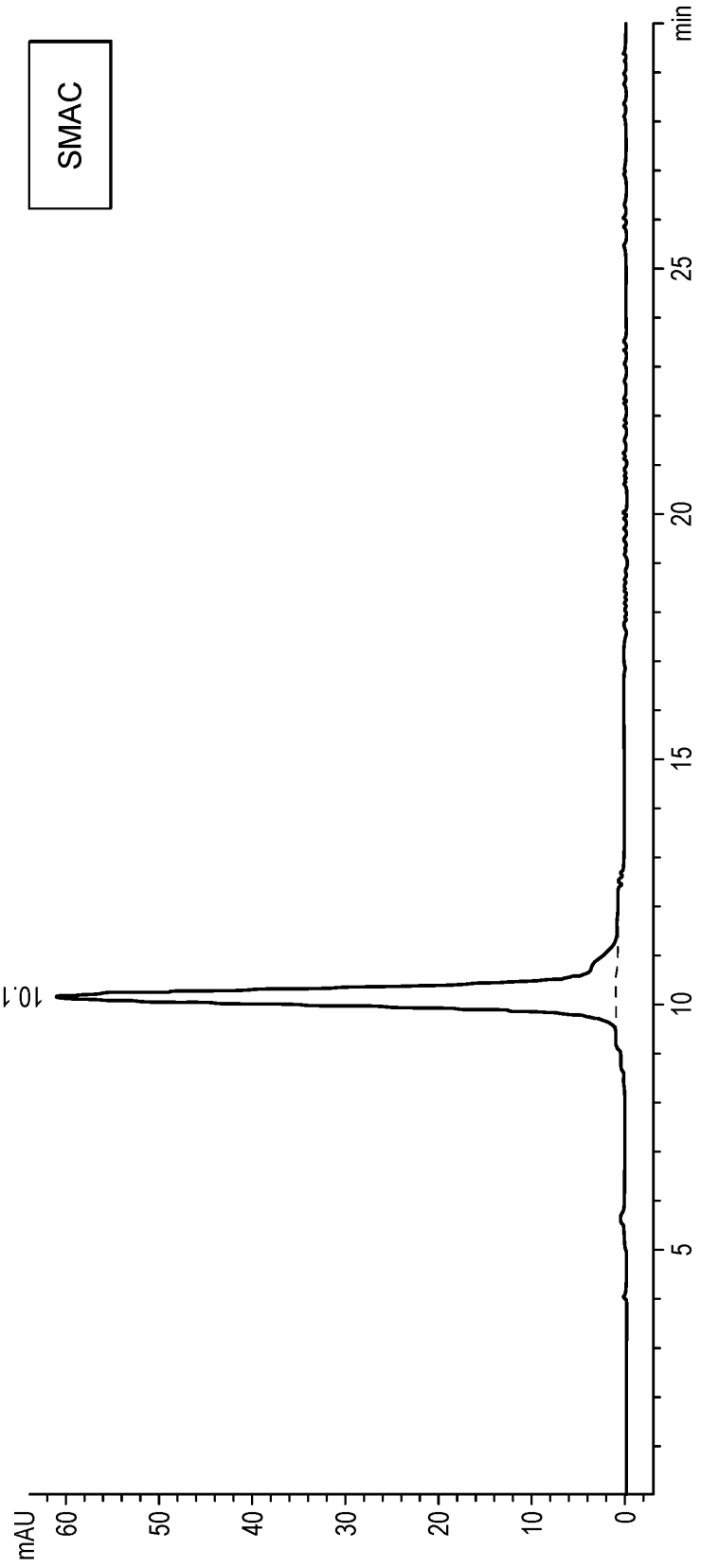

SEC
9.572
mAU
22.5
20
17.5
15
12.5
10
7.5
5
2.5
0
0
2.5
5
7.5
10
12.5
15
17.5
min
Time Area Height Width Symmetry
1 9.572 717.2 226 0.4793 0.911

FIG. 6A



#	Time	Area	Height	Width	Area%	Symmetry
1	10.628	628.2	20.5	0.4611	100.000	0.651

FIG. 6B



#	Time	Area	Height	Width	Area%	Symmetry
1	10.148	1500.2	59.9	0.3764	100.000	0.845

FIG. 6C

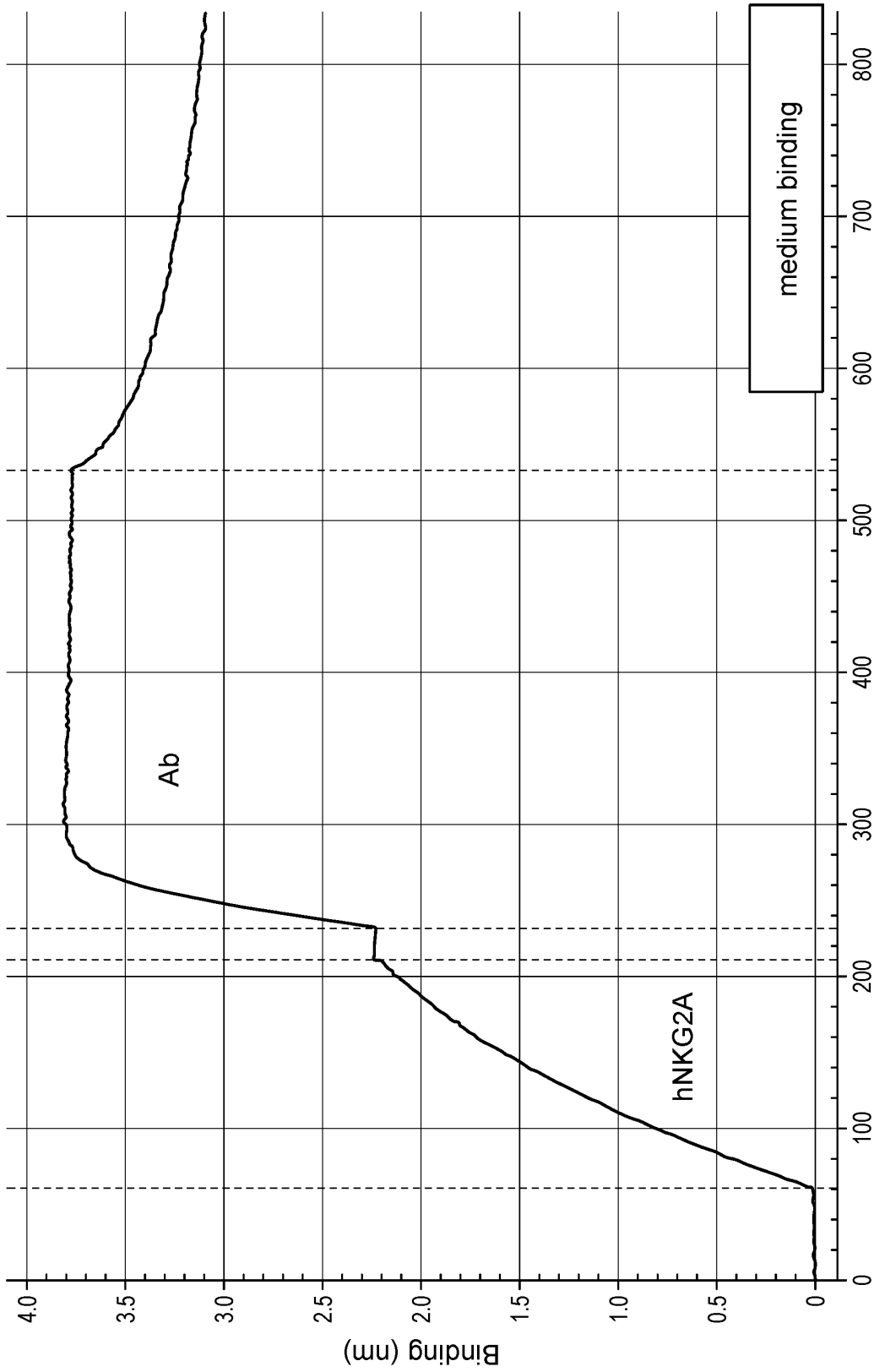

medium binding
Ab
hNKG2A
Binding (nm)
Time (sec)
Sensor B1
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
100
200
300
400
500
600
700
800

FIG. 7

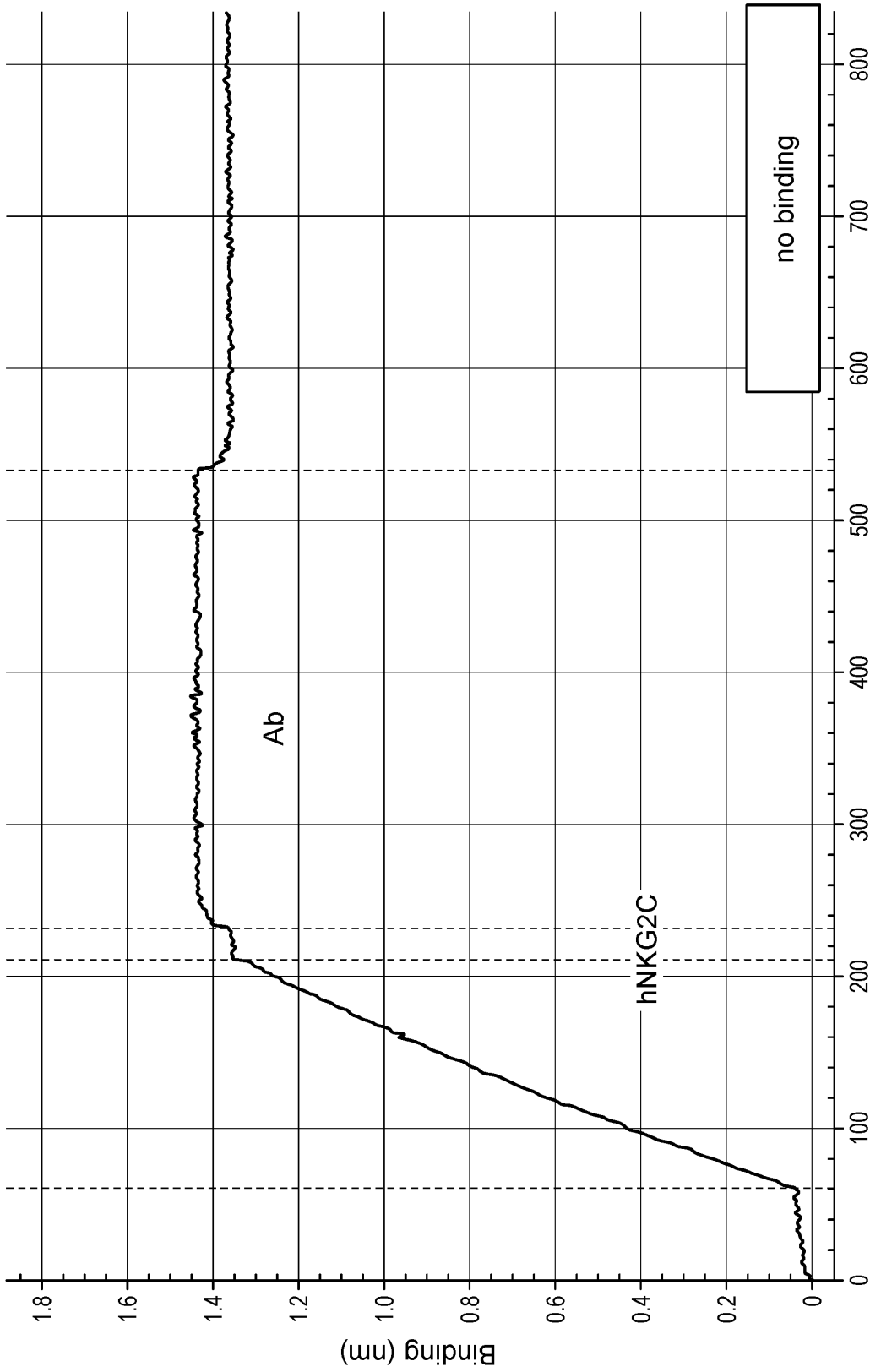

Binding (nm)
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
0
100
200
300
400
500
600
700
800
Time (sec)
Sensor B5
hNKG2C
Ab
no binding

FIG. 7 (cont.)

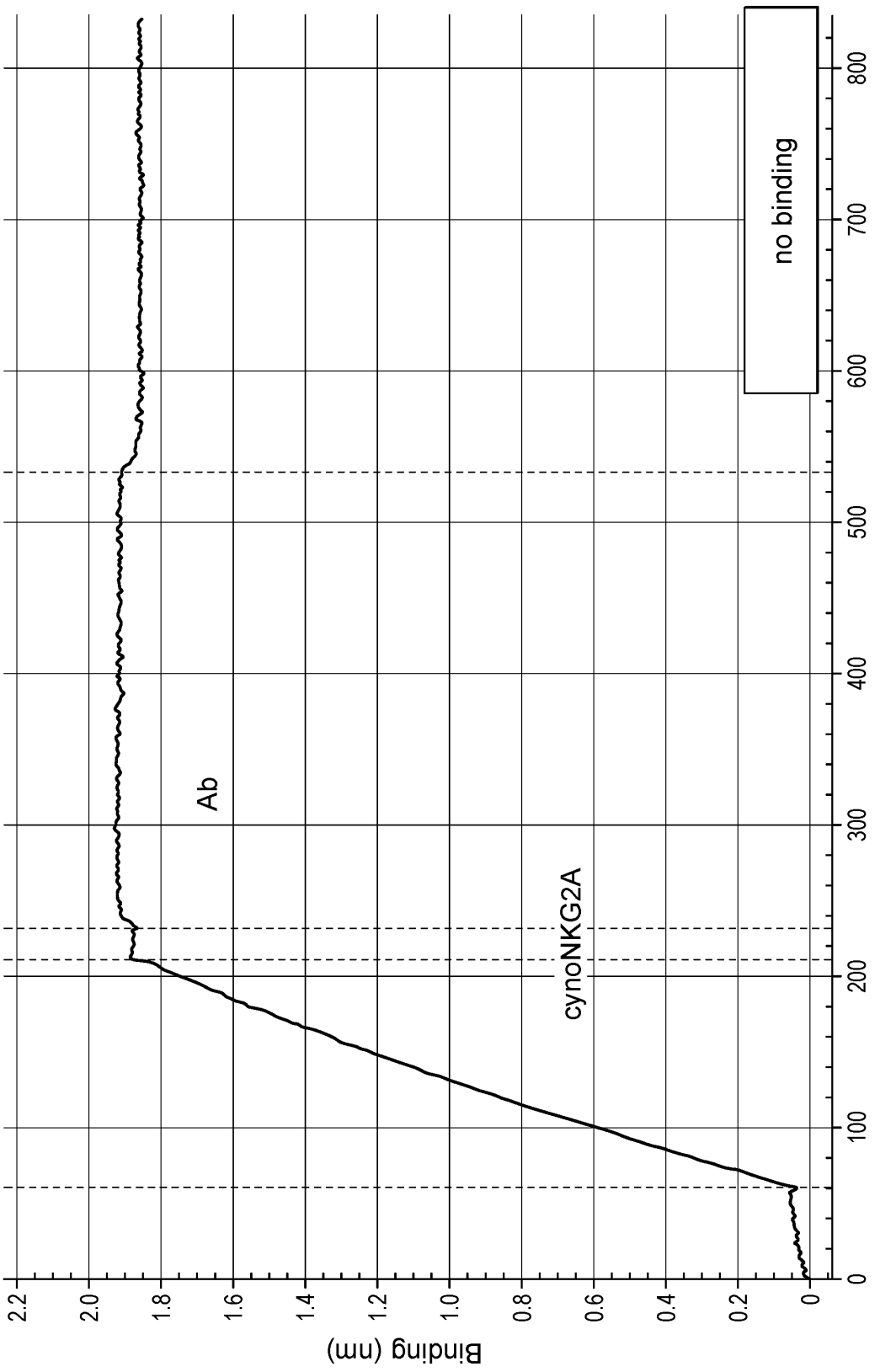

Binding (nm)
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
0
100
200
300
400
500
600
700
800
Time (sec)
Sensor B9
Ab
cynoNKG2A
no binding

FIG. 7 (cont.)

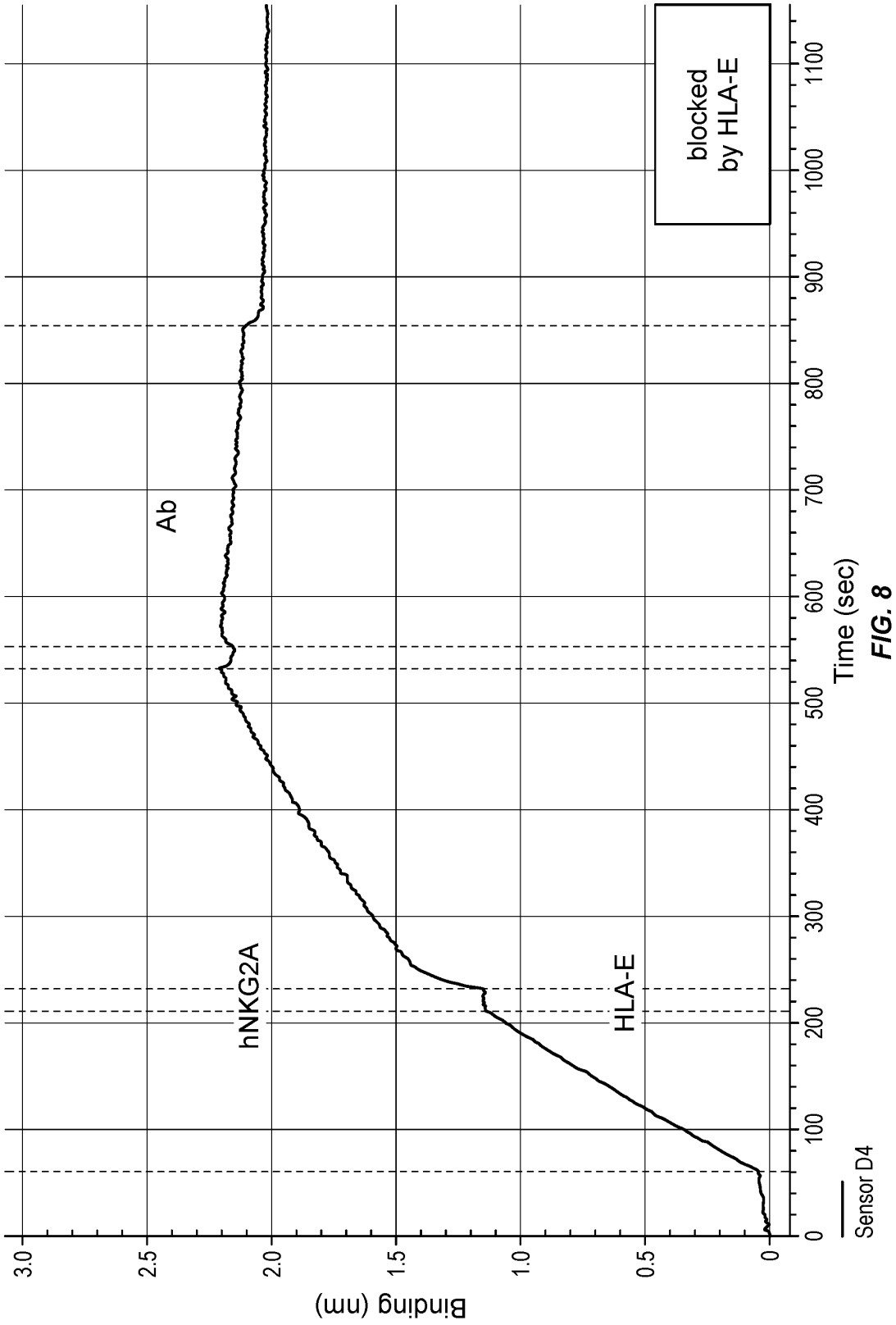
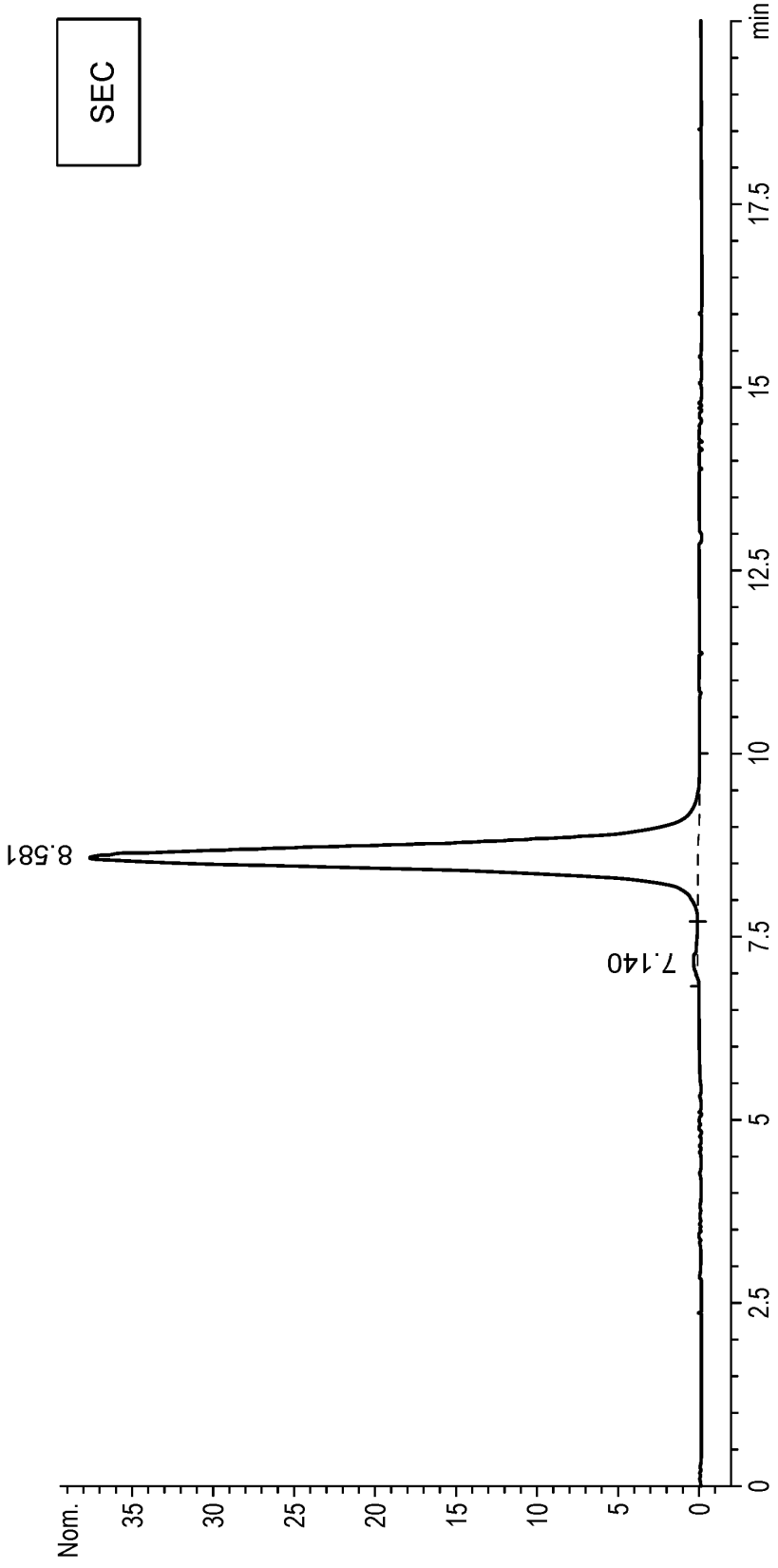
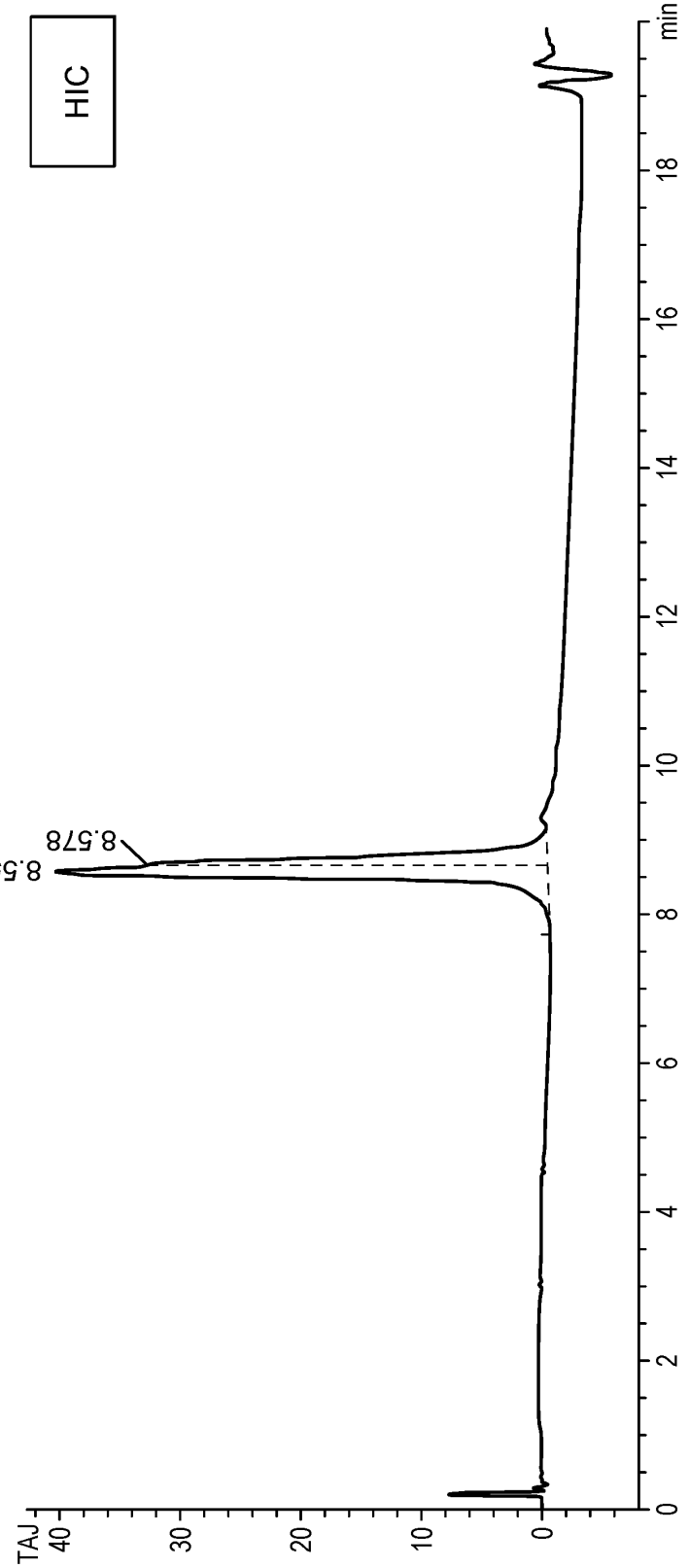

Binding (nm)
3.0
2.5
2.0
1.5
1.0
0.5
0
0
100
200
300
400
500
600
700
800
900
1000
1100
Time (sec)
Sensor D4
Ab
hNKG2A
HLA-E
blocked
by HLA-E

FIG. 8



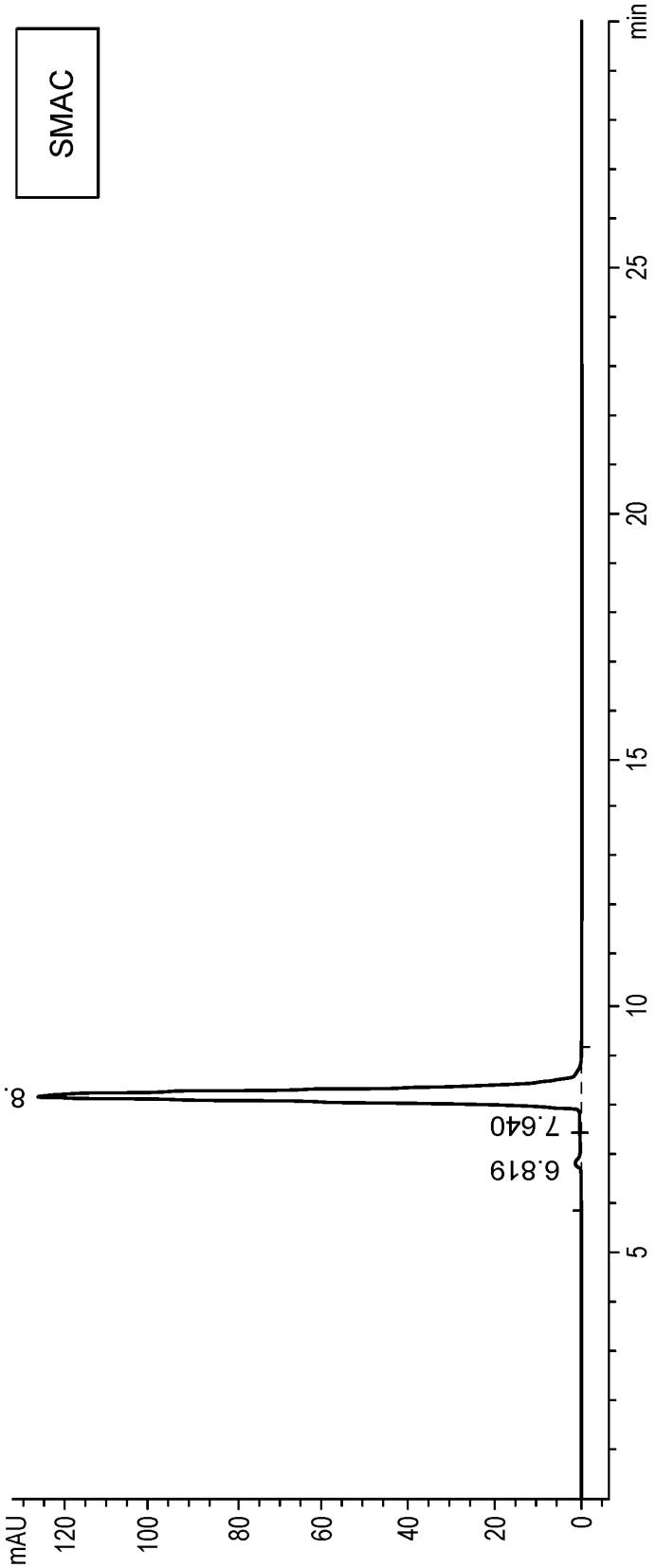
#	Time	Area	Height	Width	Symmetry
1	7.14	8.1	3.5E-1	0.3149	0.626
2	8.581	843.3	37.5	0.3396	0.893

FIG. 9A



#	Time	Area	Height	Width	Area%	Symmetry
1	8.556	449	47.8	0.3663	63.511	1.268
2	8.578	258	33.1	0.203	36.489	0.247

FIG. 9B



#	Time	Area	Height	Width	Area%	Symmetry
1	6.819	30.3	1.3	0.3417	1.524	0.561
2	7.64	13.7	9.3E-1	0.2279	0.691	1.208
3	8.173	1943.8	125.7	0.2304	97.785	0.425

FIG. 9C

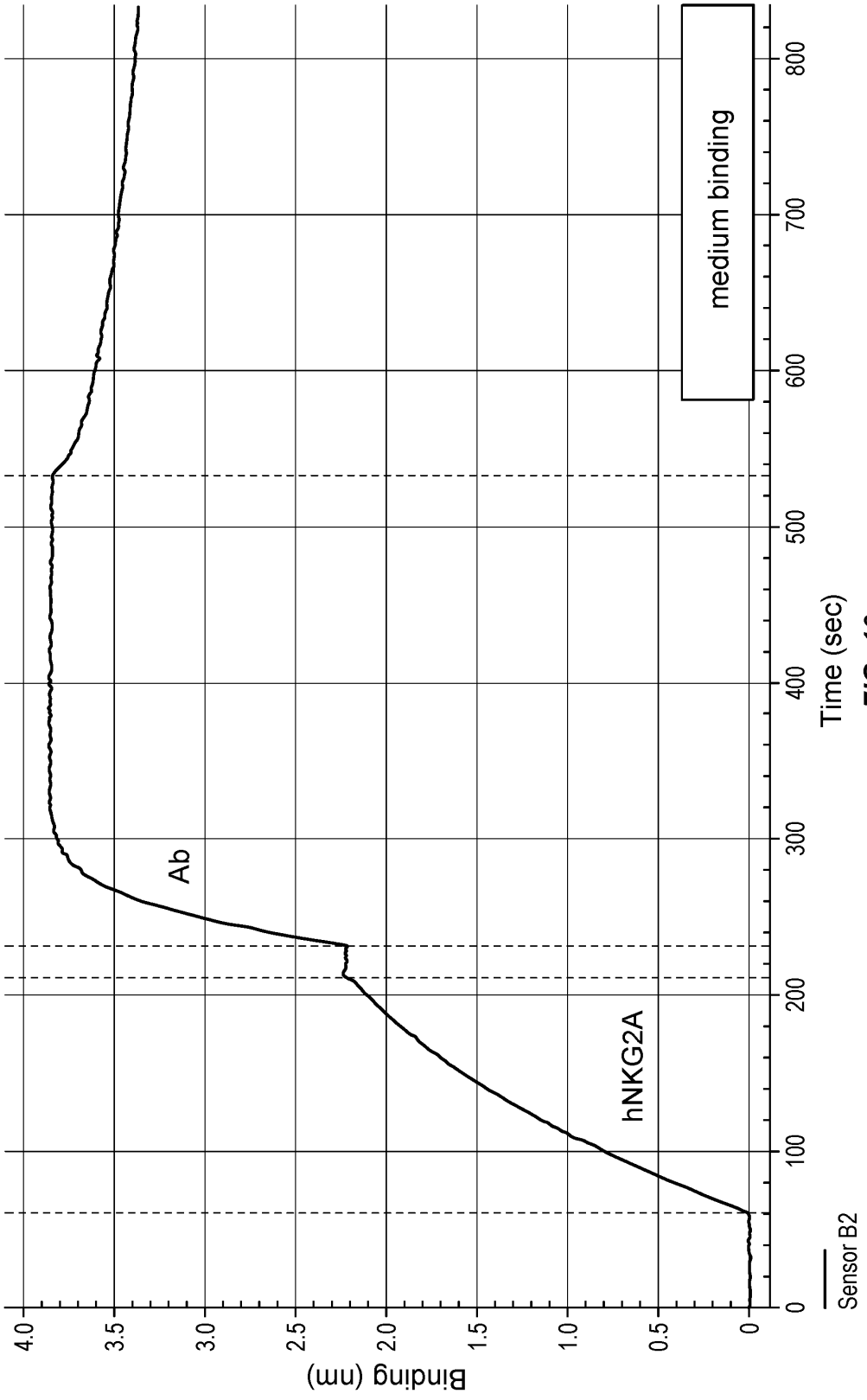

medium binding
Ab
hNKG2A
Binding (nm)
Time (sec)
Sensor B2
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
100
200
300
400
500
600
700
800

FIG. 10

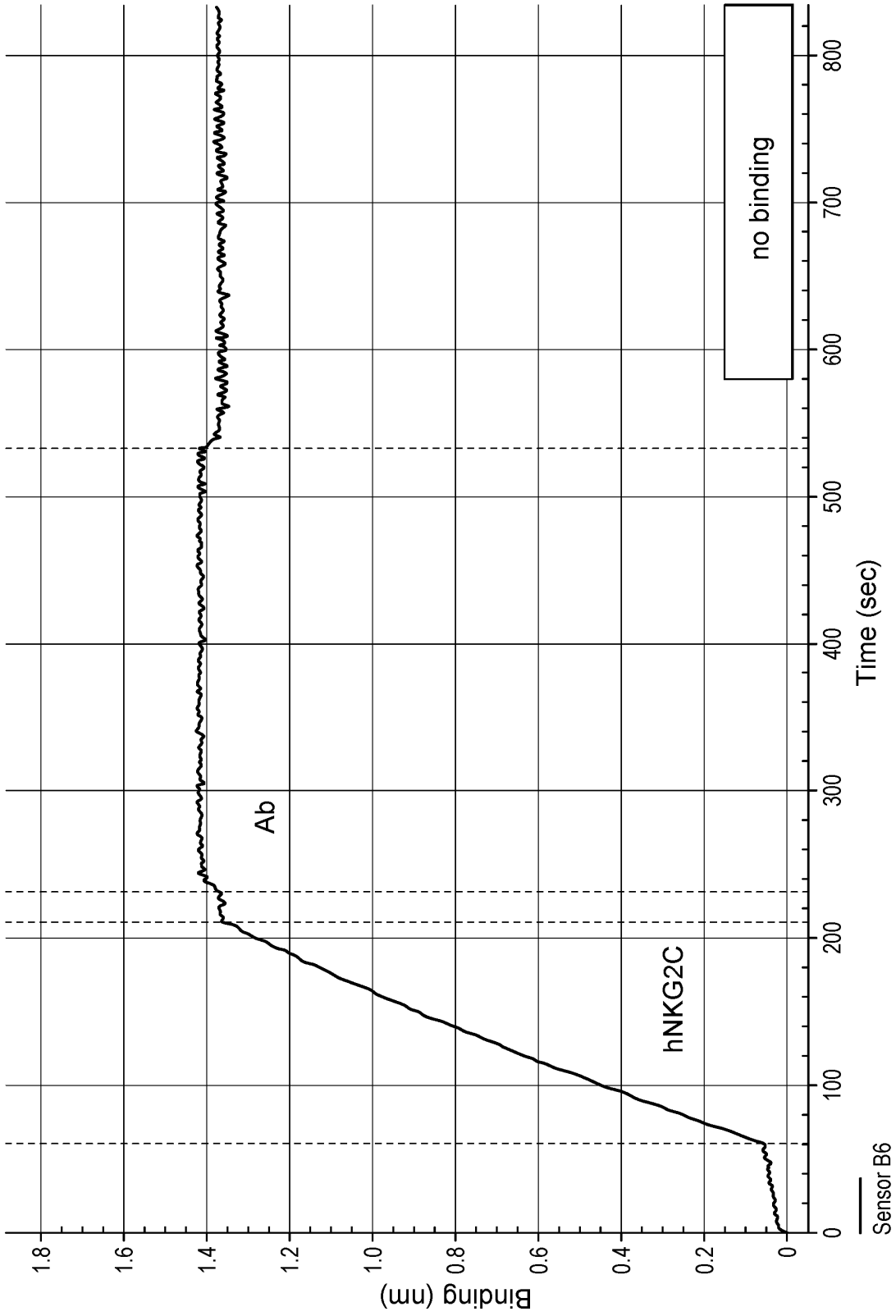

Binding (nm)
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
0
100
200
300
400
500
600
700
800
Time (sec)
Sensor B6
Ab
hNKG2C
no binding

FIG. 10 (cont.)

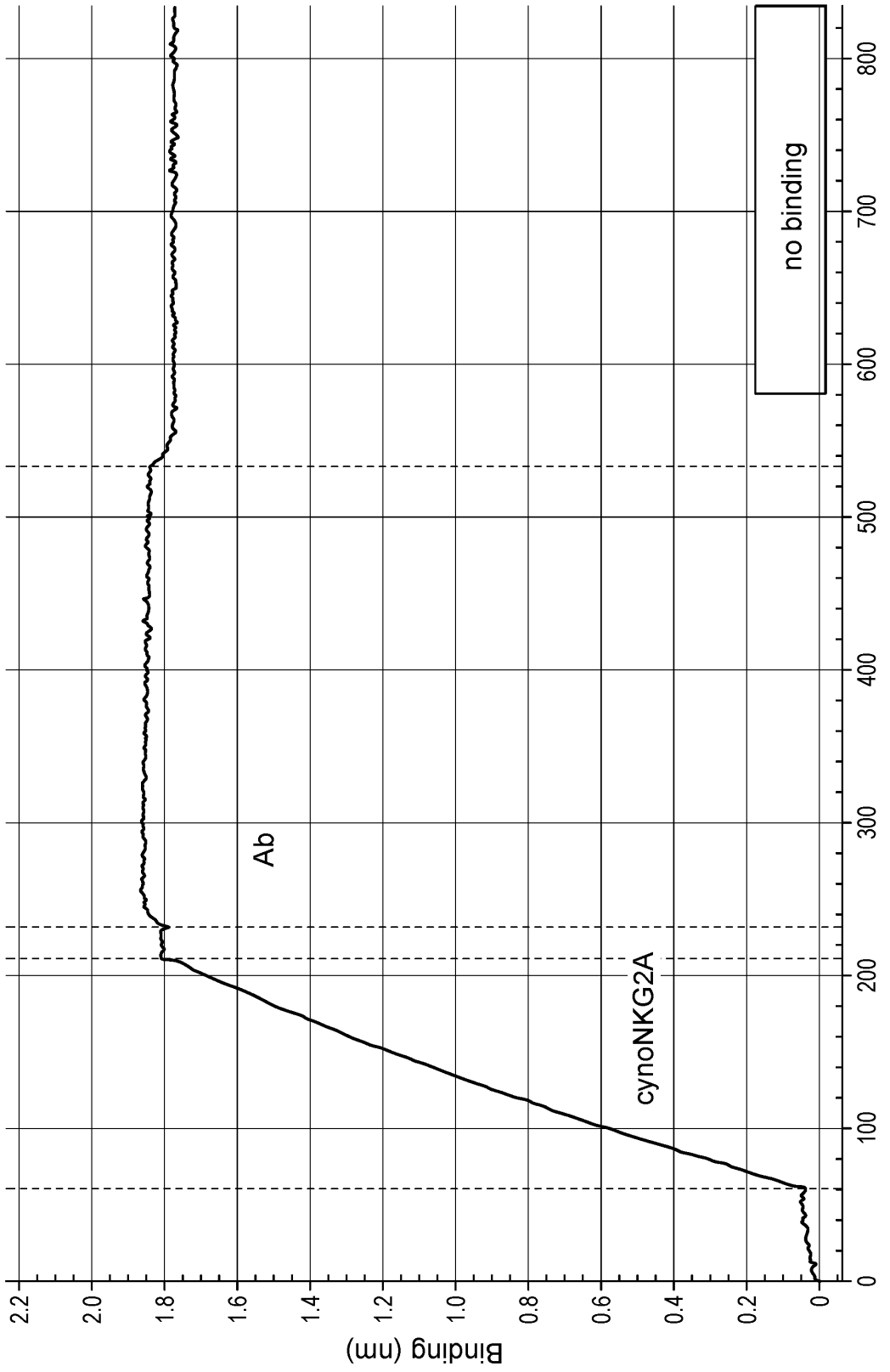

Binding (nm)
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
0
100
200
300
400
500
600
700
800
Time (sec)
Sensor B10
Ab
cynoNKG2A
no binding

FIG. 10 (cont.)

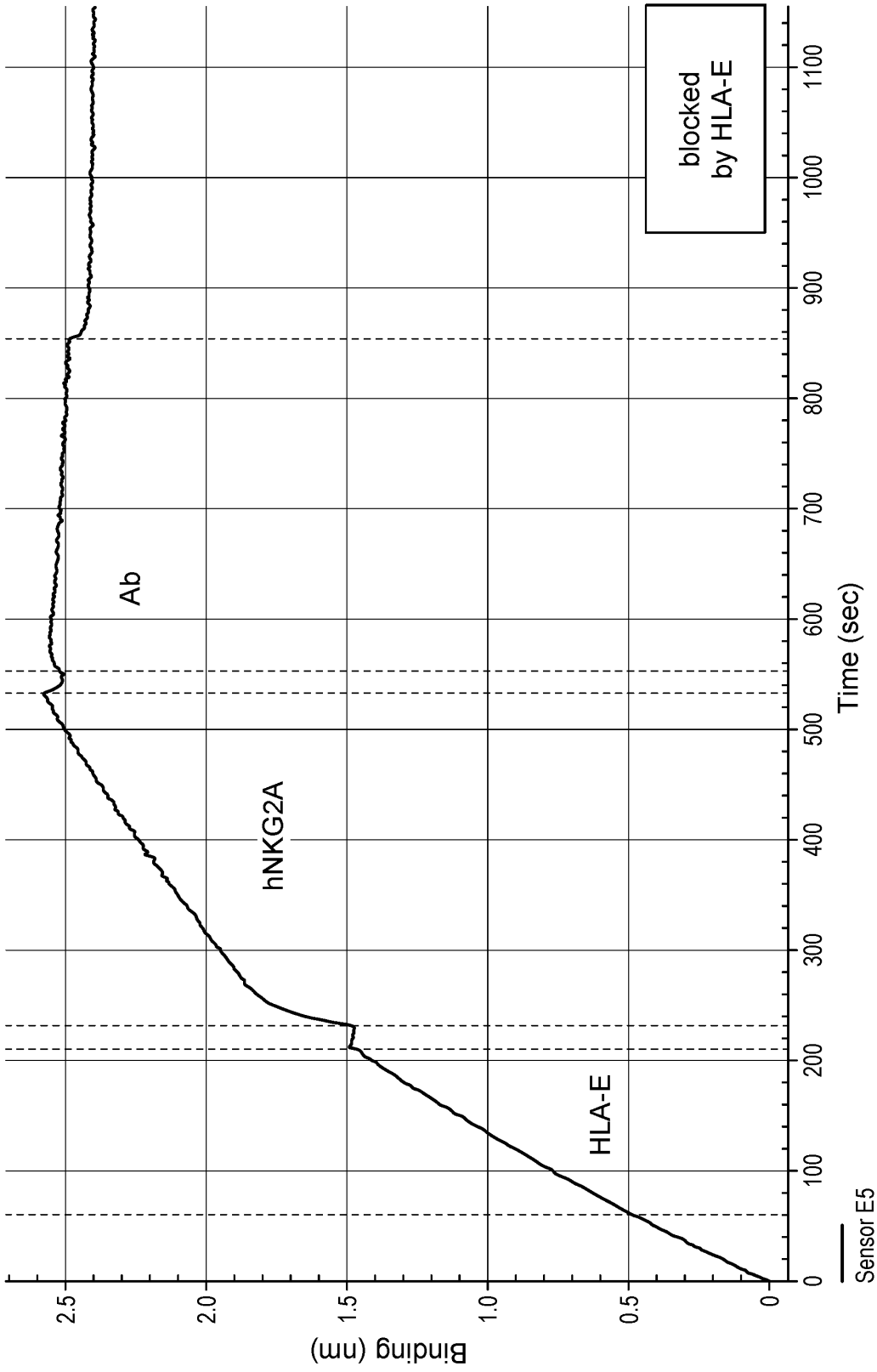
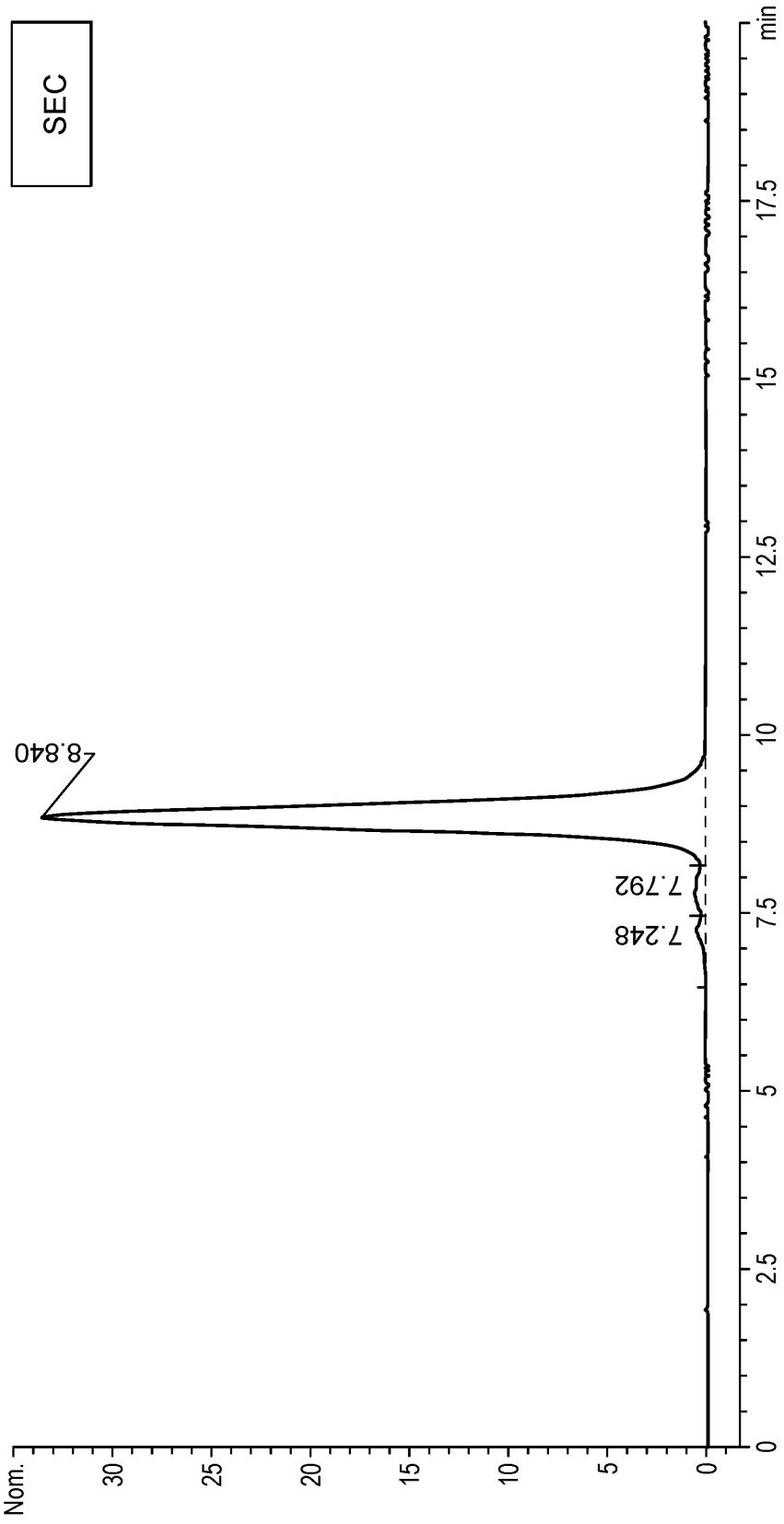
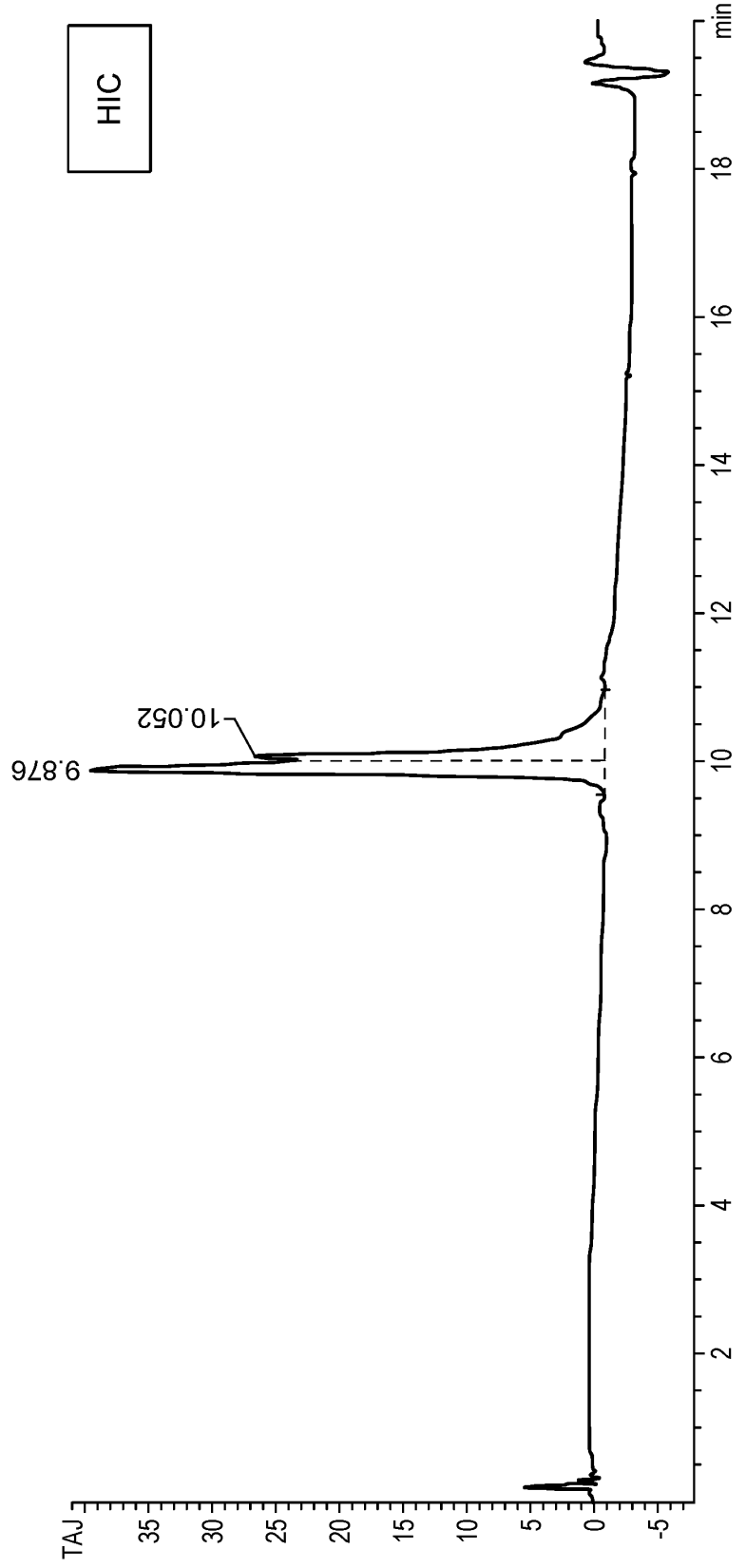

Binding (nm)
0
0.5
1.0
1.5
2.0
2.5
Time (sec)
0
100
200
300
400
500
600
700
800
900
1000
1100
Sensor E5
HLA-E
hNKG2A
Ab
blocked
by HLA-E

FIG. 11



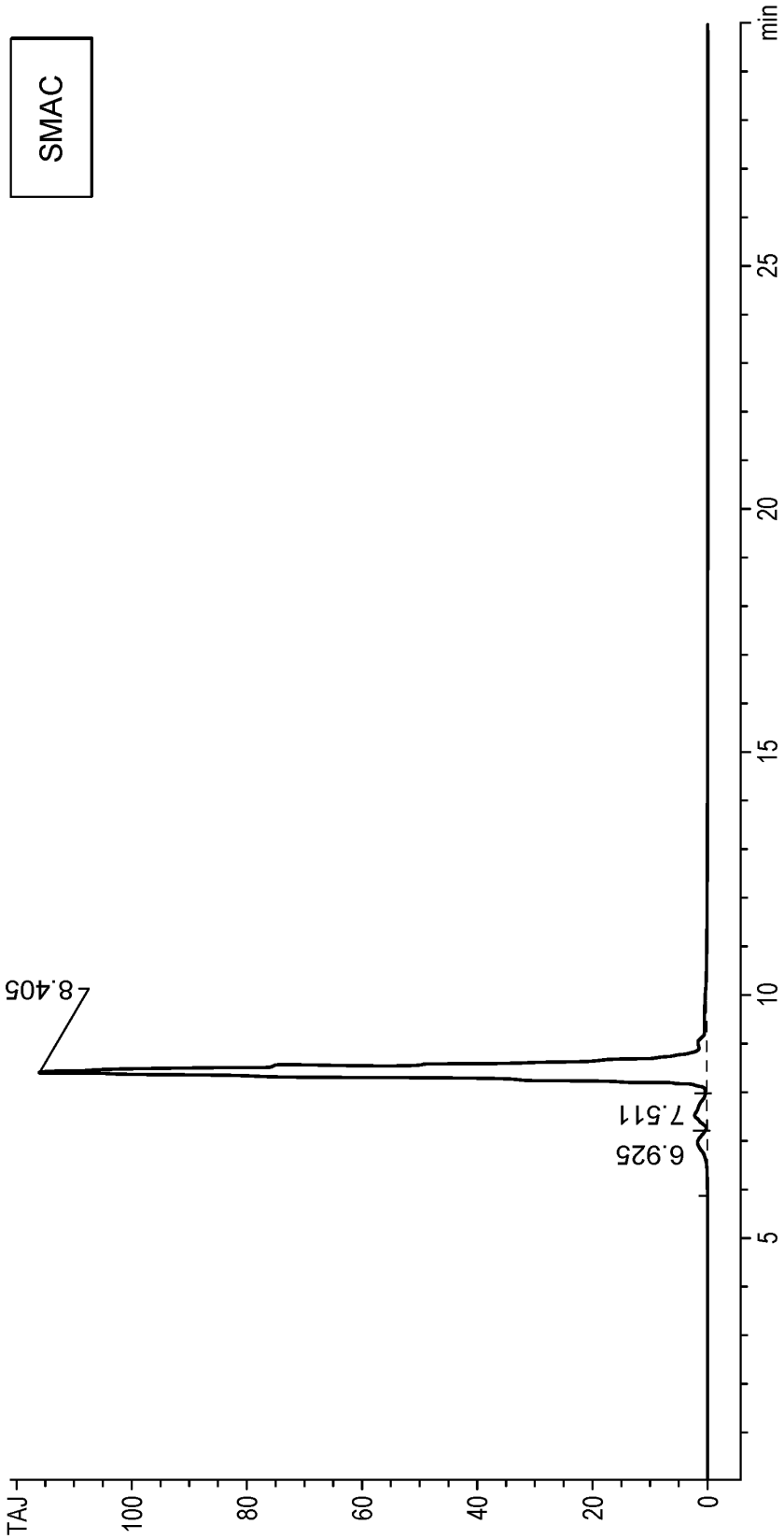
#	Time	Area	Height	Width	Symmetry
1	7.248	12	4.8E-1	0.3606	1.337
2	7.792	19.4	5.6E-1	0.4234	0.79
3	8.84	821.5	33.4	0.3731	0.888

FIG. 12A



#	Time	Area	Height	Width	Area%	Symmetry
1	9.876	410.4	40.4	0.1525	58.503	0.07
2	10.052	291.1	27.6	0.1412	41.497	0.293

FIG. 12B



#	Time	Area	Height	Width	Area%	Symmetry
1	6.925	34.2	1.5	0.3033	1.720	1.297
2	7.511	51.1	1.9	0.3785	2.570	0.682
3	8.405	1904	114.7	0.2577	95.711	0.796

FIG. 12C

Epitope Rendering Color Legend:
Black
Tight Protection/Binding
Dark Gray
Weaker Protection/Binding
Apo-CD94
NKG2a-CD94-HLAE complex highlighting epitope that overlaps with NKG2a/HLA-E α1 interface
Apo-NKG2a
NKG2a-CD94 Hetero-Dimer
epitope highlighted in black and dark-gray
HLA-E α1/α2 domains
Model from PDB 3CDG – structure of human NKG2a/CD94/HLA-E complex

FIG. 13

Region	Peptide Sequence
Region 1 (40-45)	TWEESL (SEQ ID NO:86)
Region 2 (68-78)	SIISPSSWIGV (SEQ ID NO:87)
Region 3 (79-87)	**FRNSSHHPW** (SEQ ID NO:88)
Region 4 (99-107)	IKDS**DNAEL** (SEQ ID NO:89)
Region 5 (112-116)	LQVNR (SEQ ID NO:90)
Region 6 (120-126)	AQCGSSI (SEQ ID NO:91)

Epitope Rendering Color Legend:

- **Black** (tight protection/binding)
- *Dark Gray* (weaker protection/binding)

FIG. 14

International application No. PCT/US2024/013029

PCT/US2024/013029

A. CLASSIFICATION OF SUBJECT MATTER

IPC: ***A61K 39/395*** (2024.01); ***A61P 35/00*** (2024.01); ***A61P 37/00*** (2024.01); ***C07K 16/28*** (2024.01); ***C12N 15/85*** (2024.01)

CPC: ***C07K 16/2851; A61K 39/3955; A61K 39/39558; A61P 35/00; A61P 37/00; C12N 15/85;*** *A61K 2039/505; C07K 2317/565; C07K 2317/76*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History Document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History Document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History Document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2015/0125464 A1 (INNATE PHARMA S.A. et al.) 07 May 2015 (07.05.2015) entire document	1-5, 10
A	US 2021/0363265 A1 (INVENRA INC.) 25 November 2021 (25.11.2021) entire document	1-5, 10
A	WO 2020/237320 A1 (THE COUNCIL OF THE QUEENSLAND INSTITUTE OF MEDICAL RESEARCH) 03 December 2020 (03.12.2020) entire document	1-5, 10

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

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"D" document cited by the applicant in the international application

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
26 March 2024 (26.03.2024)	**16 May 2024 (16.05.2024)**

Name and mailing address of the ISA/US	Authorized officer
Mail Stop PCT, Attn: ISA/US **Commissioner for Patents** **P.O. Box 1450, Alexandria, VA 22313-1450**	**MATOS** **TAINA**
Facsimile No. **571-273-8300**	Telephone No. **571-272-4300**