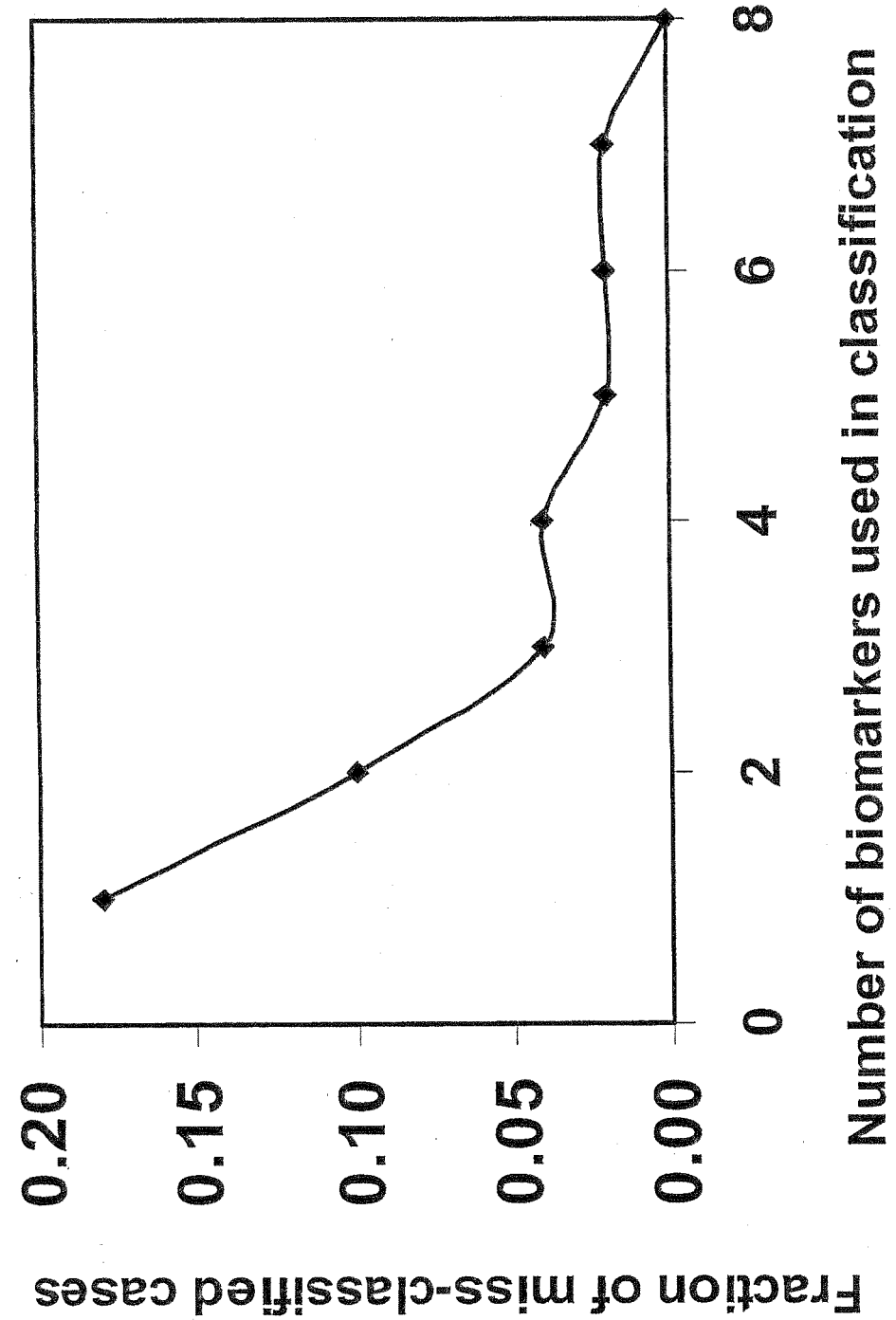

Fraction of miss-classified cases
0.20
0.15
0.10
0.05
0.00
0
2
4
6
8
Number of biomarkers used in classification

FIG. 1

FIG. 2A

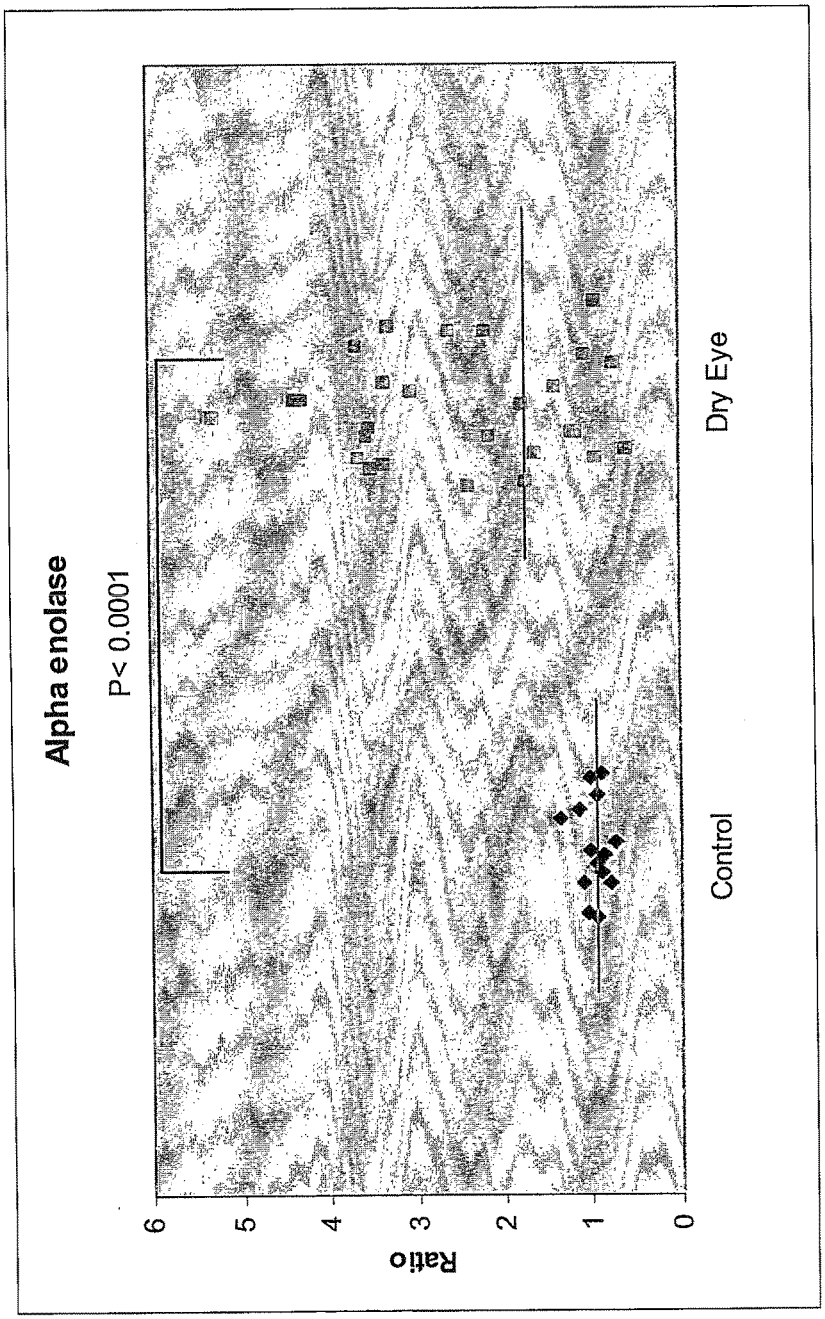


FIG. 2B

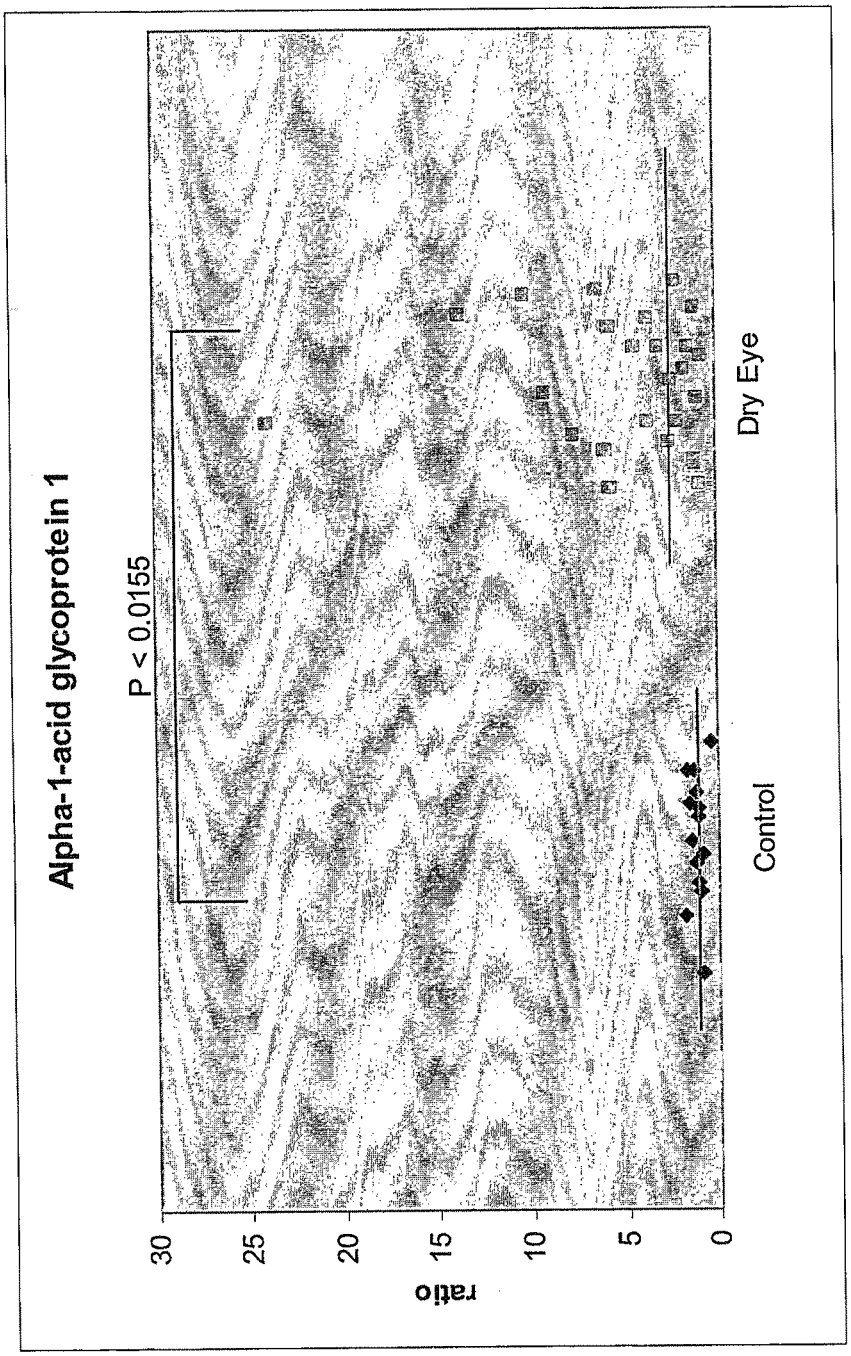

Alpha-1-acid glycoprotein 1
P < 0.0155
ratio
30
25
20
15
10
5
0
Control
Dry Eye

FIG. 2C

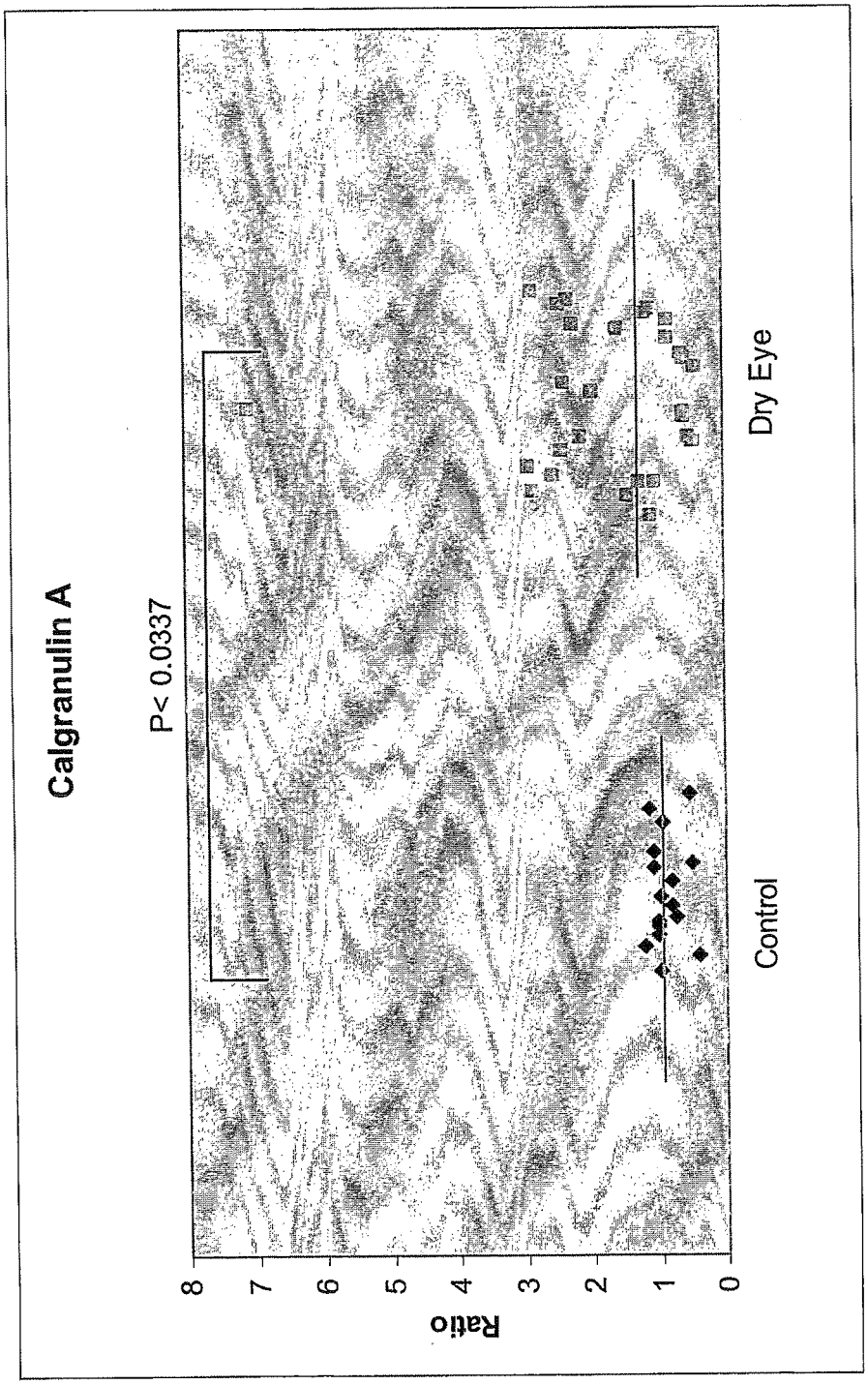


FIG. 2D

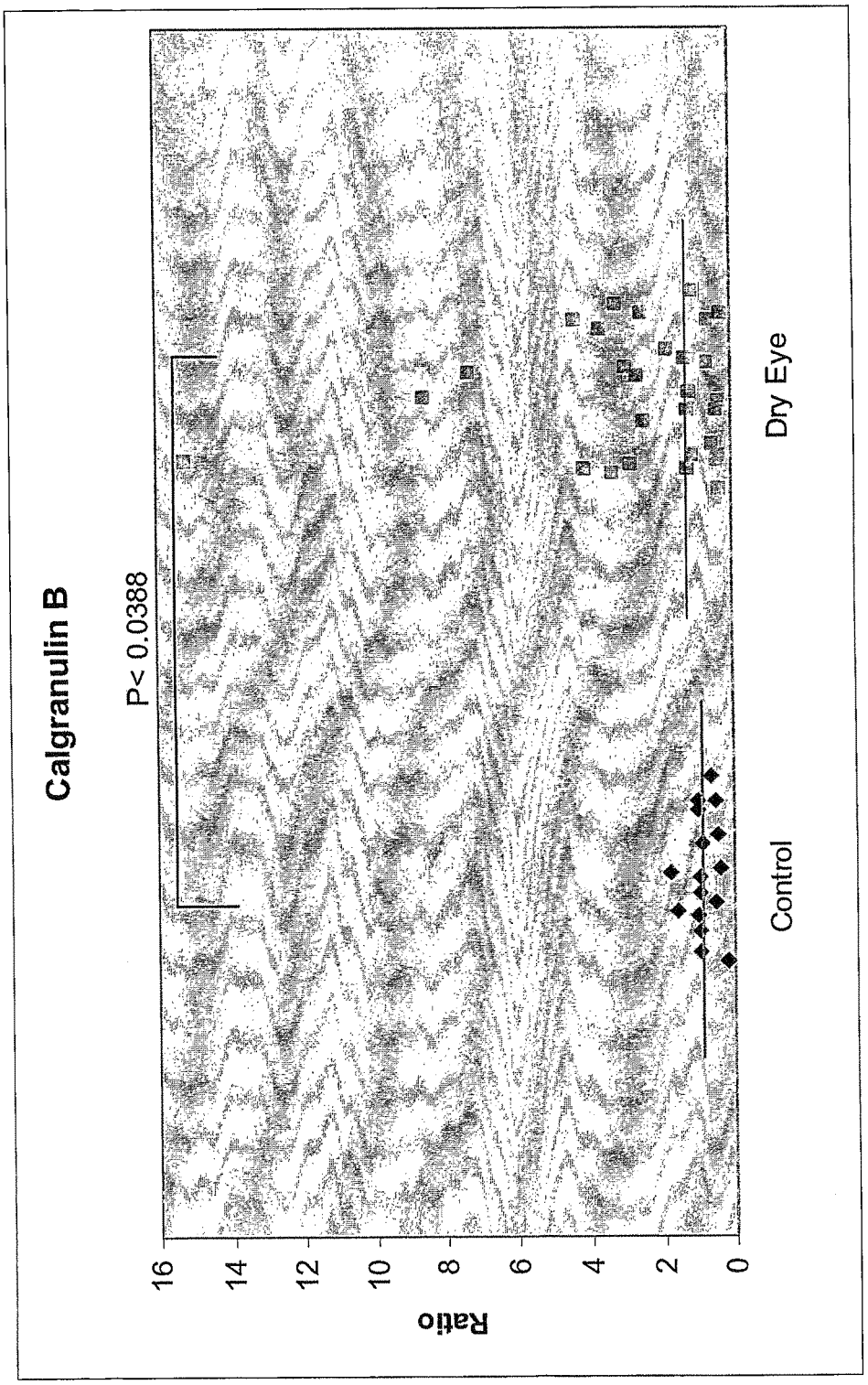


FIG. 2E

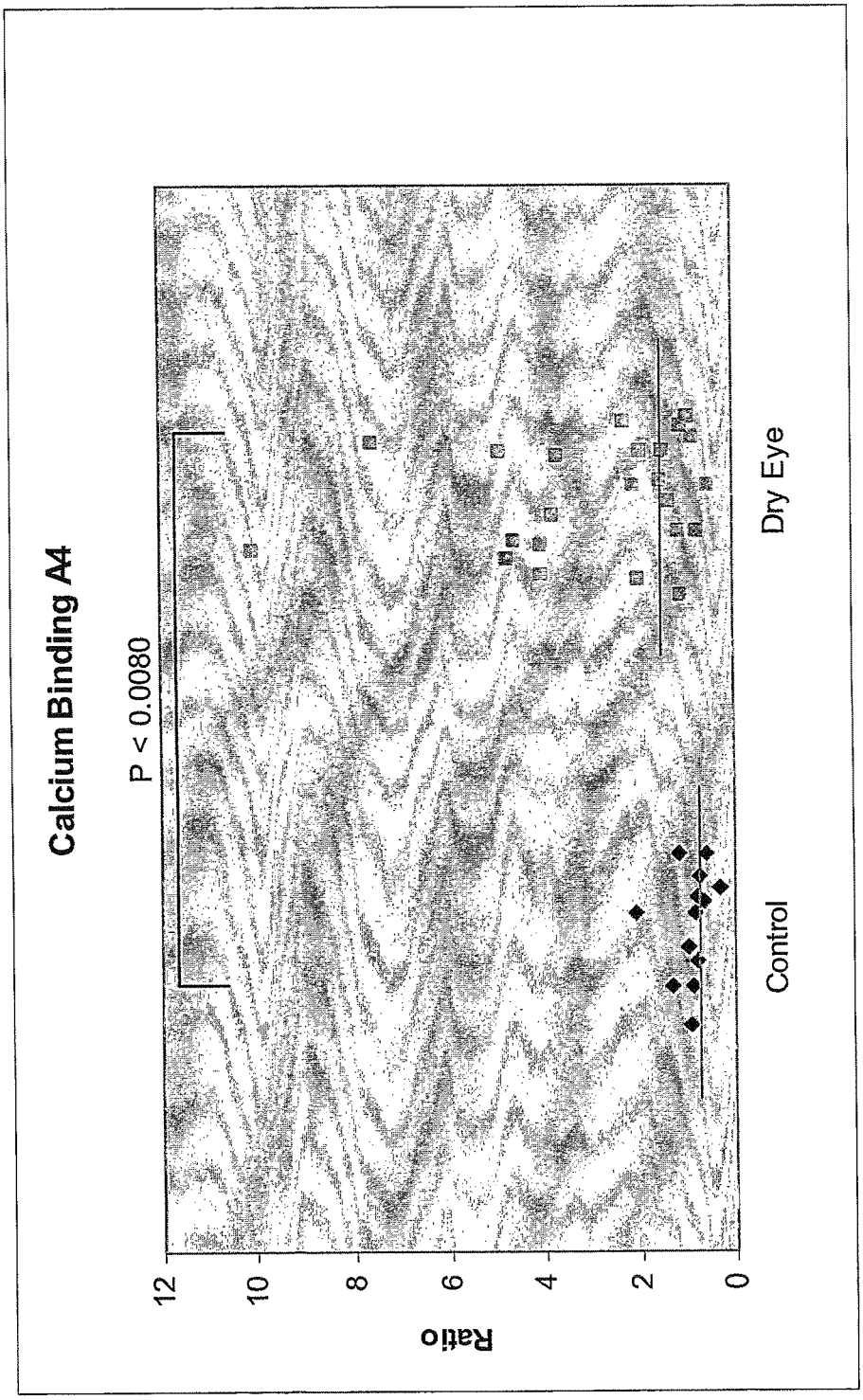


FIG. 2F

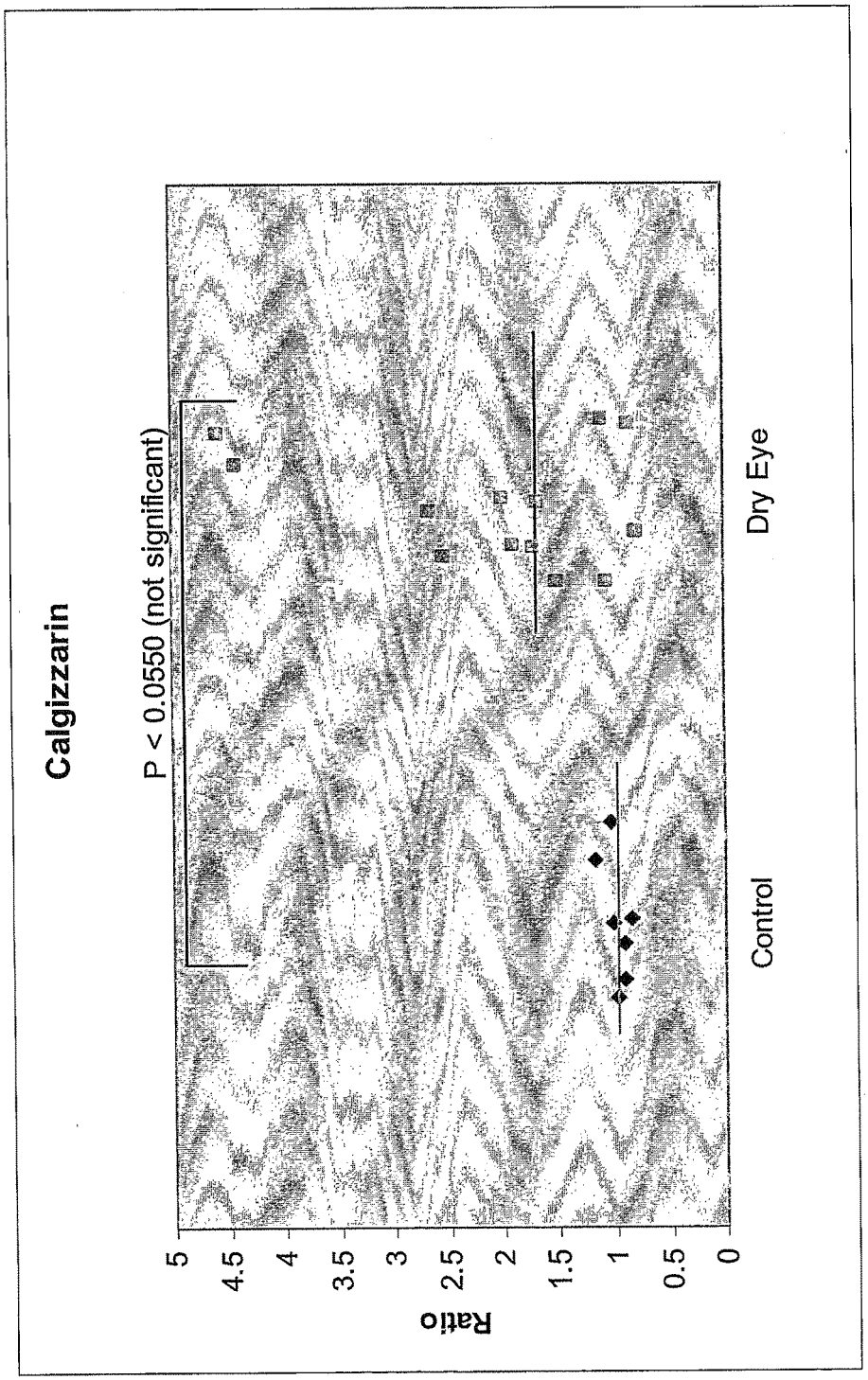

Calgizzarin
P < 0.0550 (not significant)
Ratio
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Control
Dry Eye

FIG. 2G

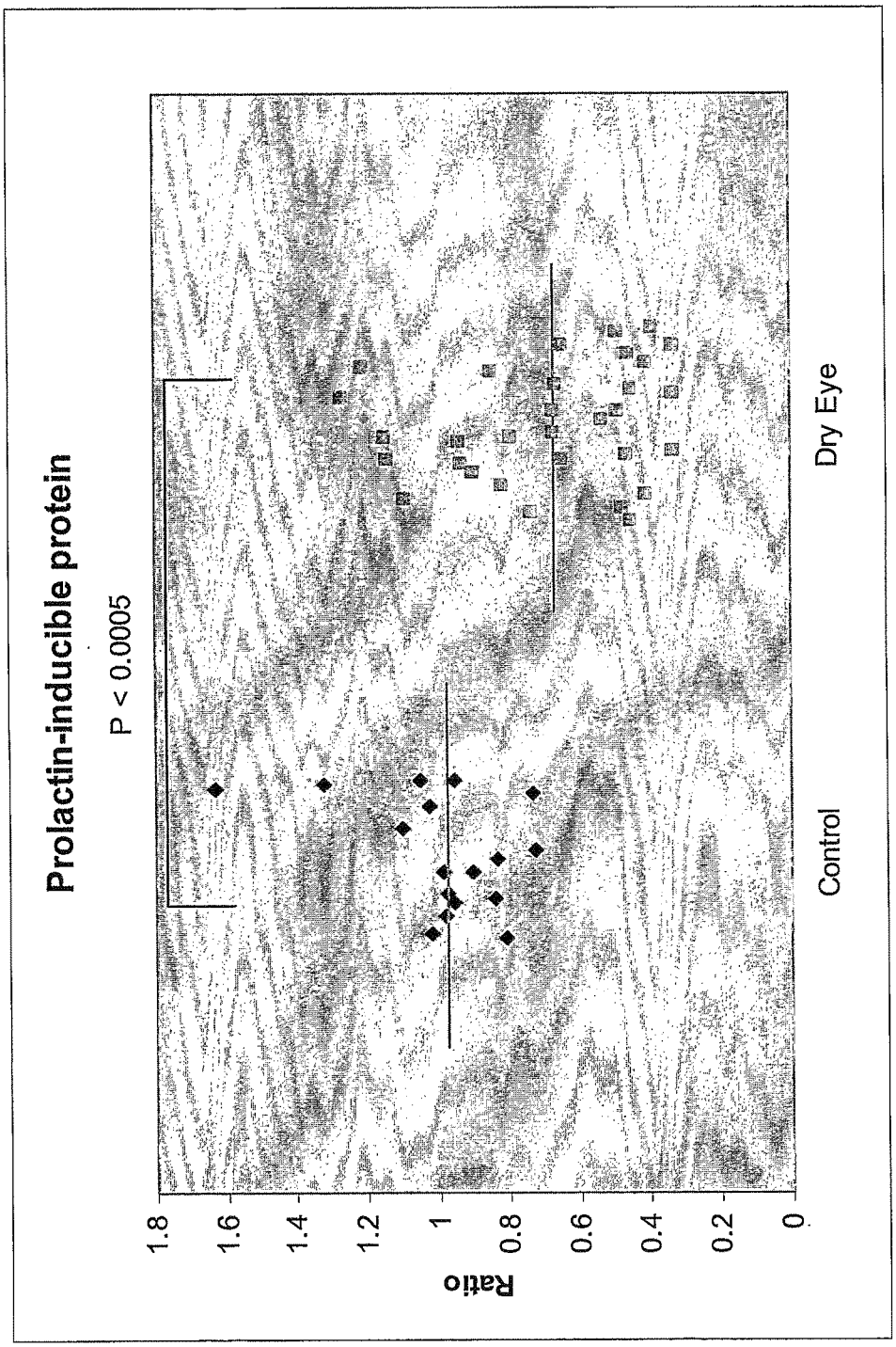

Prolactin-inducible protein
P < 0.0005
Ratio
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Control
Dry Eye

FIG. 2H

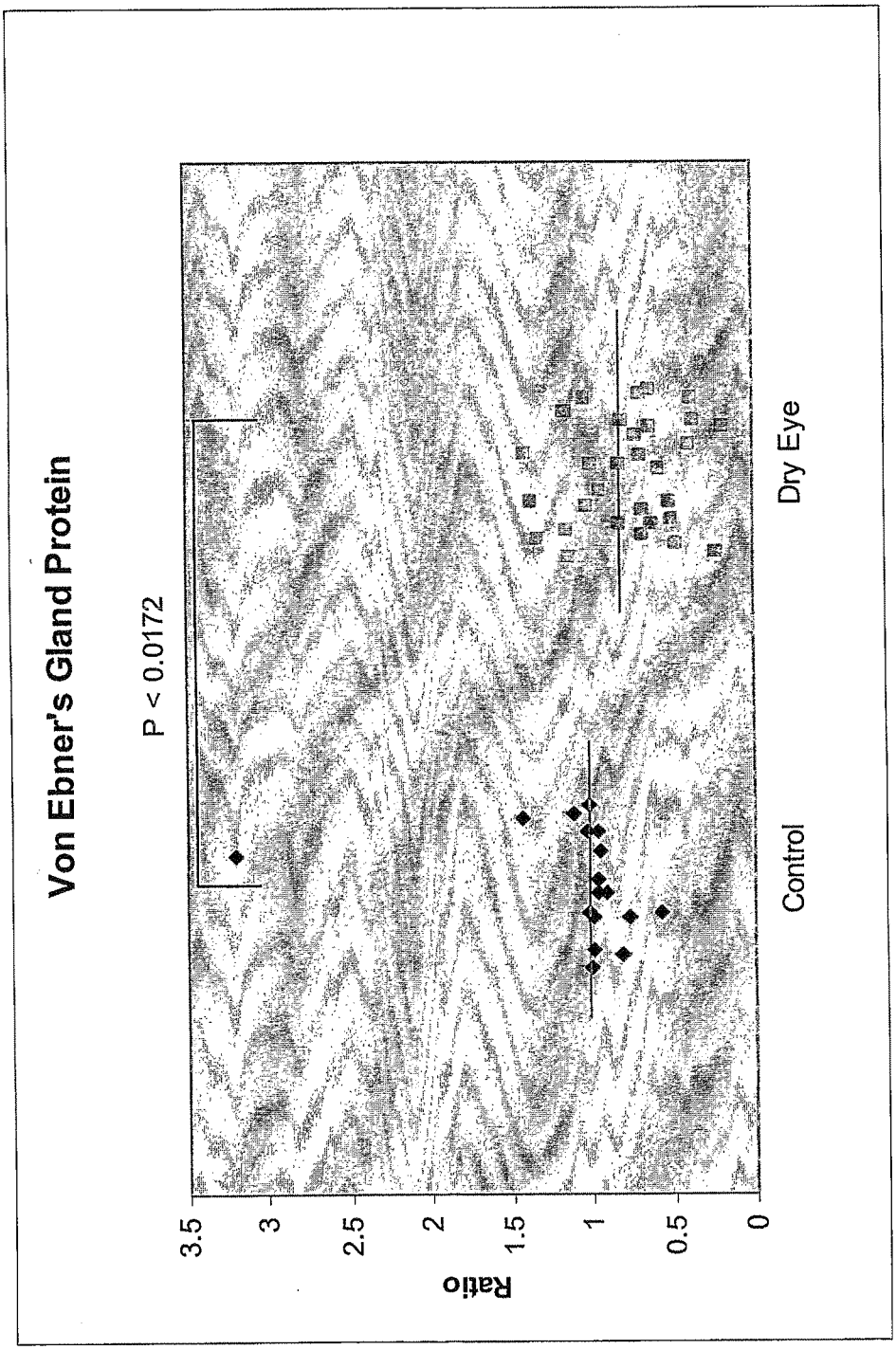

Von Ebner's Gland Protein
P < 0.0172
Ratio
3.5
3
2.5
2
1.5
1
0.5
0
Control
Dry Eye

FIG. 2I

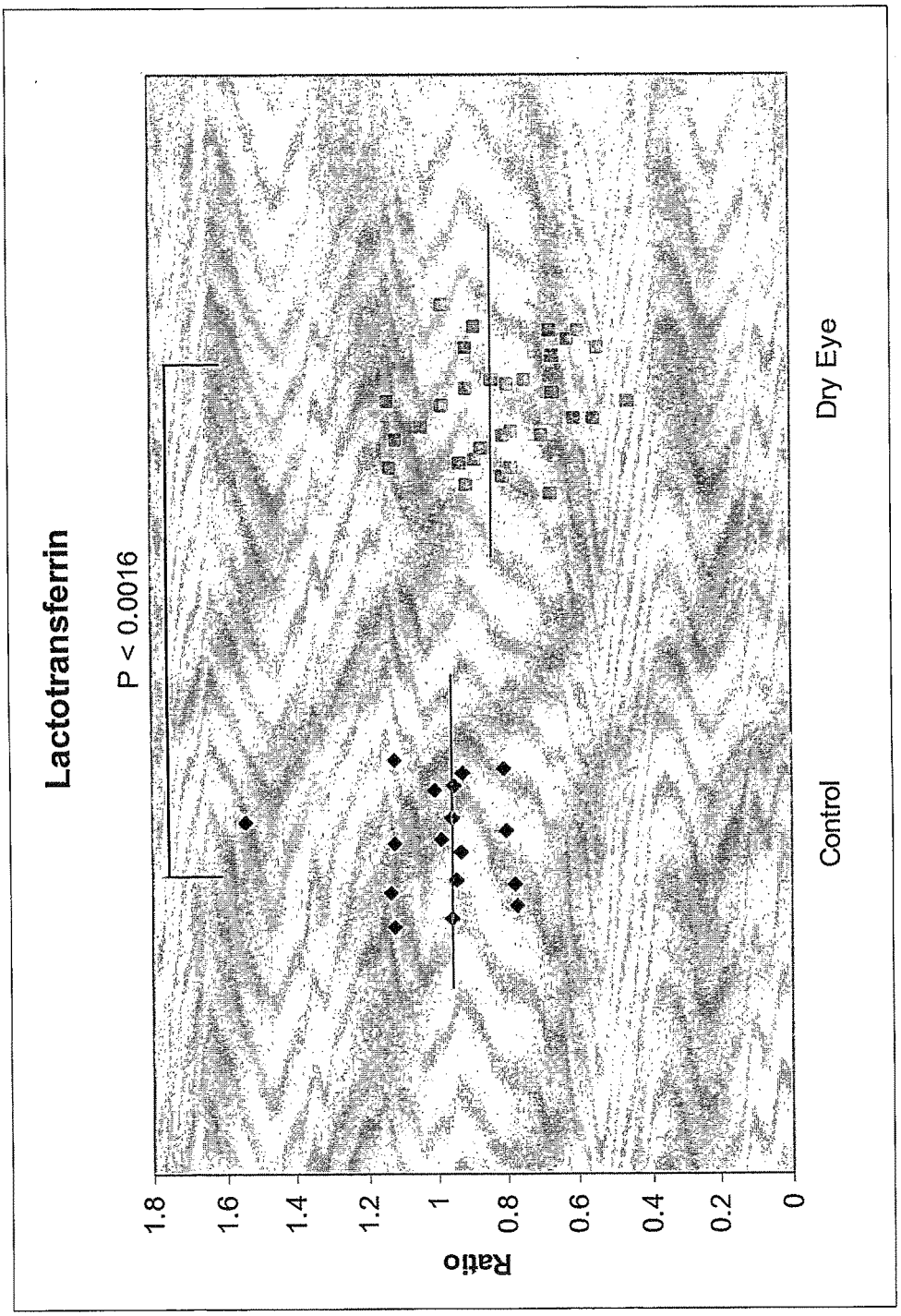

Lactotransferrin
P < 0.0016
Ratio
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Control
Dry Eye

FIG. 2J

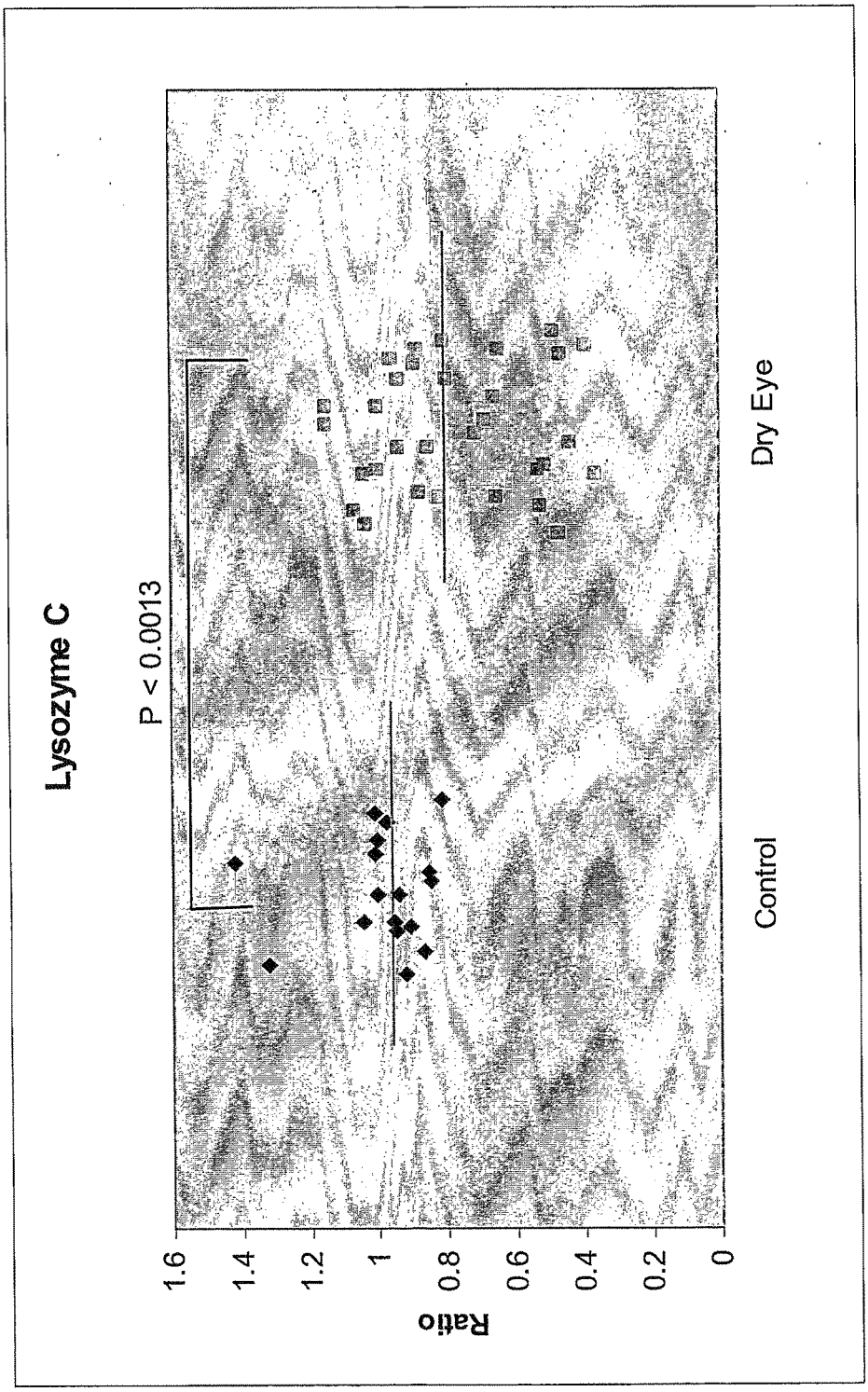


FIG. 3A

Prolactin-inducible protein
TYLISSIPLQGAFNYJ
(701.70, 3+)

#	b	y
1	246.16	291.22
2	409.22	454.28
3	522.31	568.32
4	635.39	715.39
5	722.42	786.43
6	809.45	843.45
7	*922.54*	971.51
8	*1019.59*	1084.59
9	*1132.67*	1181.64
10	*1260.73*	*1294.73*
11	*1317.75*	*1381.76*
12	*1388.79*	*1468.79*
13	*1535.86*	*1581.88*
14	*1649.9*	*1694.96*
15	*1812.97*	*1858.02*

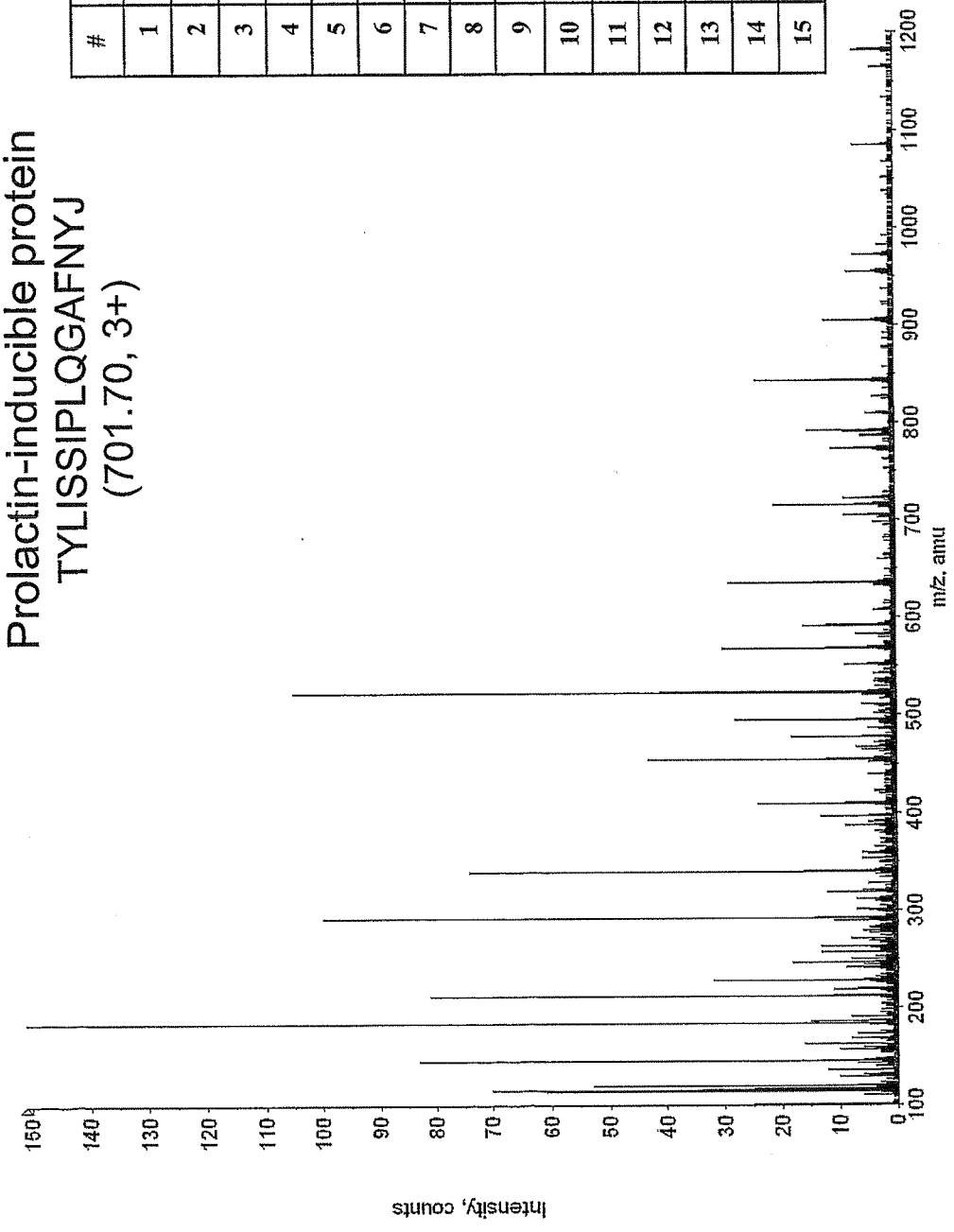


FIG. 3B

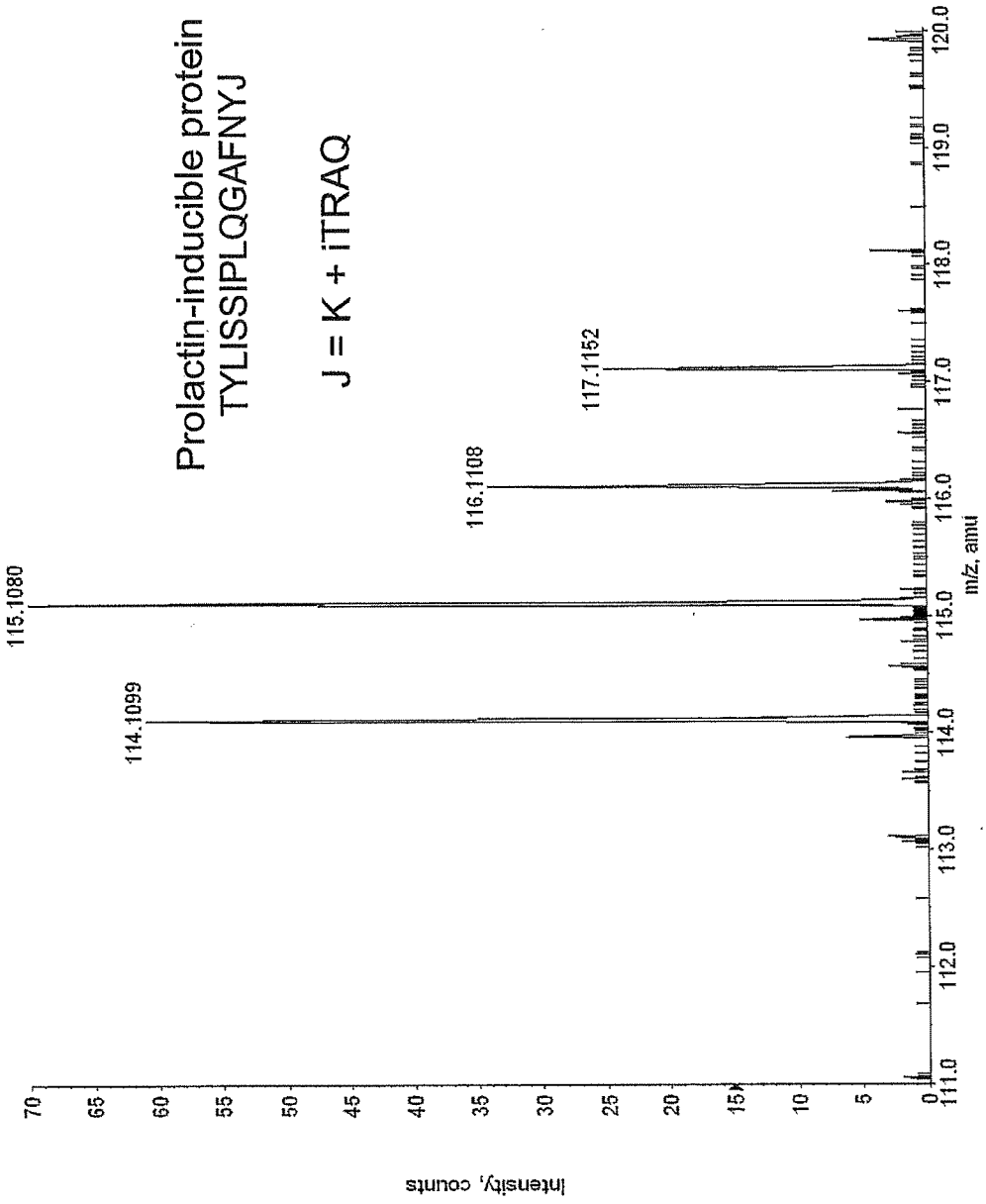
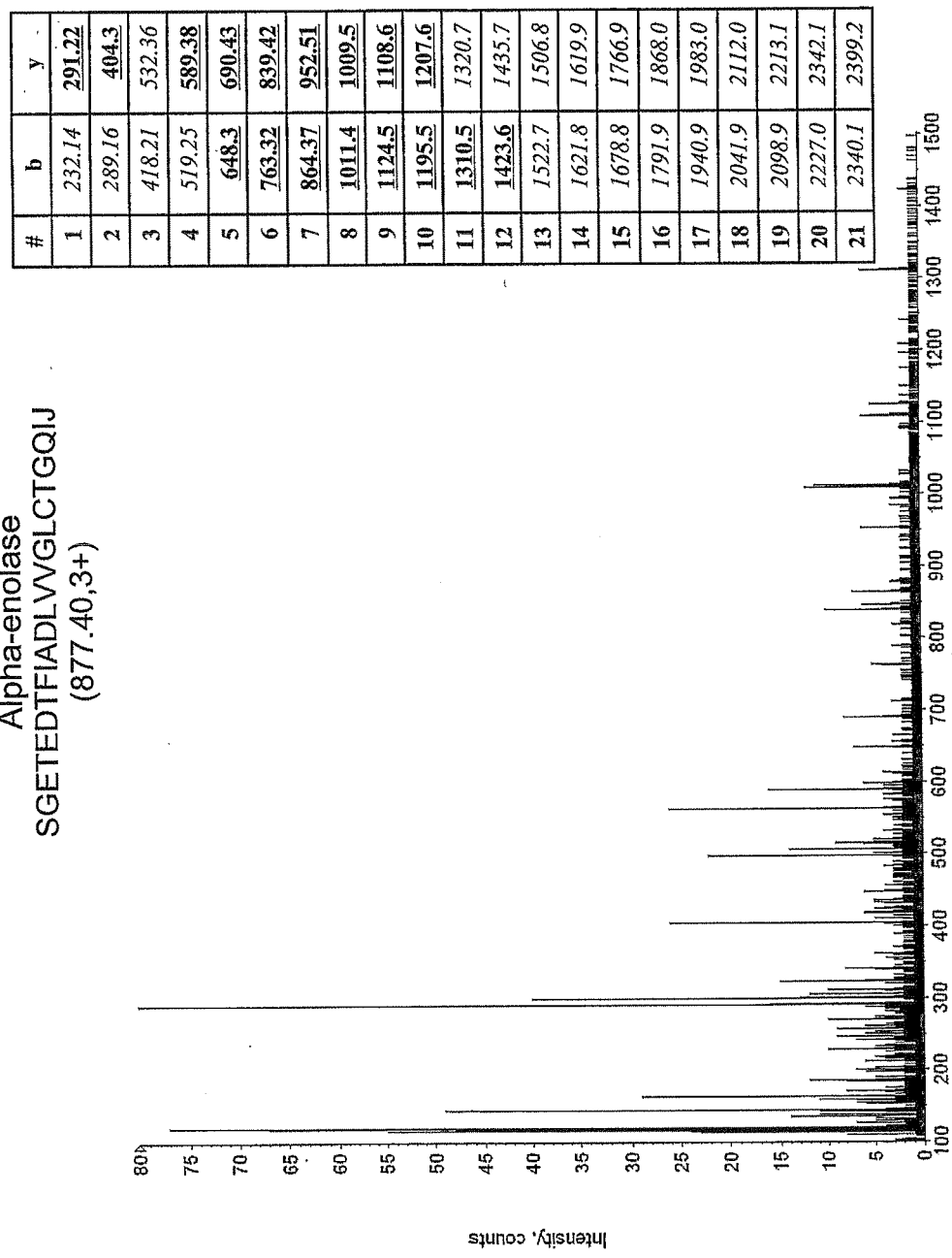

Prolactin-inducible protein
TYLISSIPLQGAFNYJ
J = K + iTRAQ
115.1080
114.1099
116.1108
117.1152
Intensity, counts
m/z, amu

FIG. 4A



#	b	y
1	*232.14*	291.22
2	*289.16*	404.3
3	*418.21*	*532.36*
4	*519.25*	589.38
5	648.3	690.43
6	763.32	839.42
7	864.37	952.51
8	1011.4	1009.5
9	1124.5	1108.6
10	1195.5	1207.6
11	1310.5	*1320.7*
12	1423.6	*1435.7*
13	*1522.7*	*1506.8*
14	*1621.8*	*1619.9*
15	*1678.8*	*1766.9*
16	*1791.9*	*1868.0*
17	*1940.9*	*1983.0*
18	*2041.9*	*2112.0*
19	*2098.9*	*2213.1*
20	*2227.0*	*2342.1*
21	*2340.1*	*2399.2*

FIG. 4B

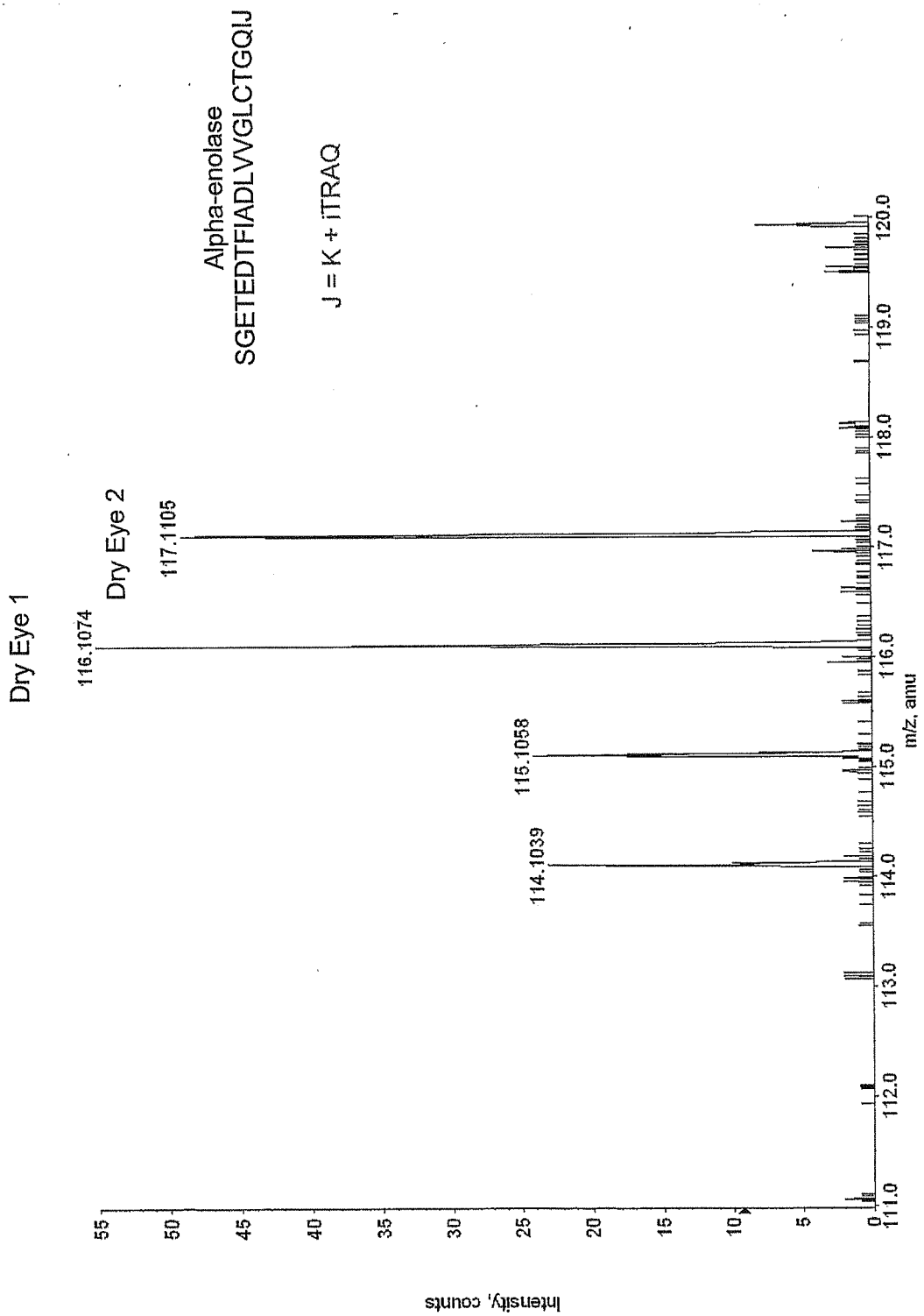
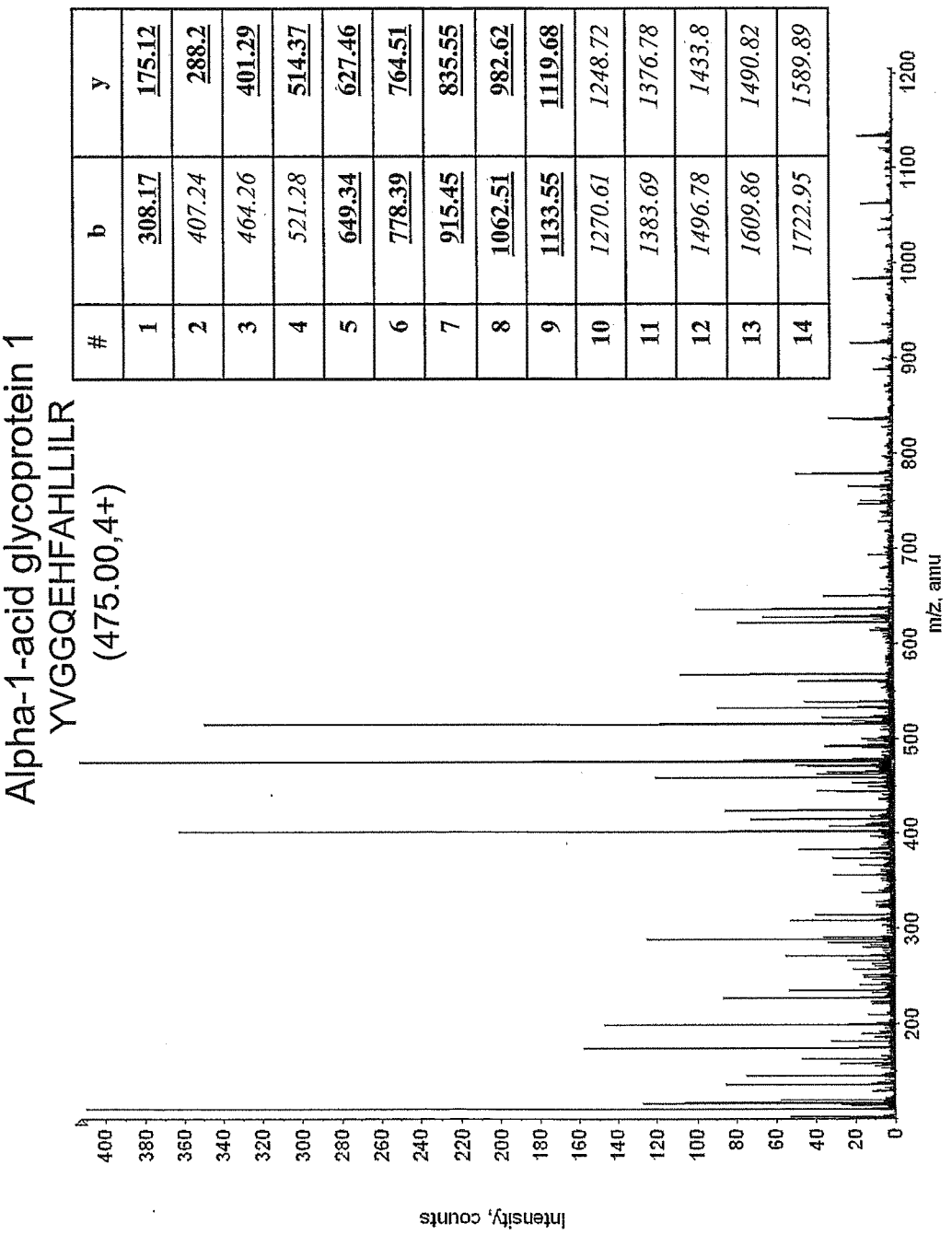

Dry Eye 1
Dry Eye 2
116.1074
117.1105
Alpha-enolase
SGETEDTFIADLVVGLCTGQIJ
J = K + iTRAQ
115.1058
114.1039
Intensity, counts
m/z, amu

FIG. 5A



#	b	y
1	308.17	175.12
2	*407.24*	288.2
3	*464.26*	401.29
4	*521.28*	514.37
5	649.34	*627.46*
6	*778.39*	764.51
7	915.45	835.55
8	1062.51	982.62
9	1133.55	1119.68
10	*1270.61*	*1248.72*
11	*1383.69*	*1376.78*
12	*1496.78*	*1433.8*
13	*1609.86*	*1490.82*
14	*1722.95*	*1589.89*

FIG. 5B

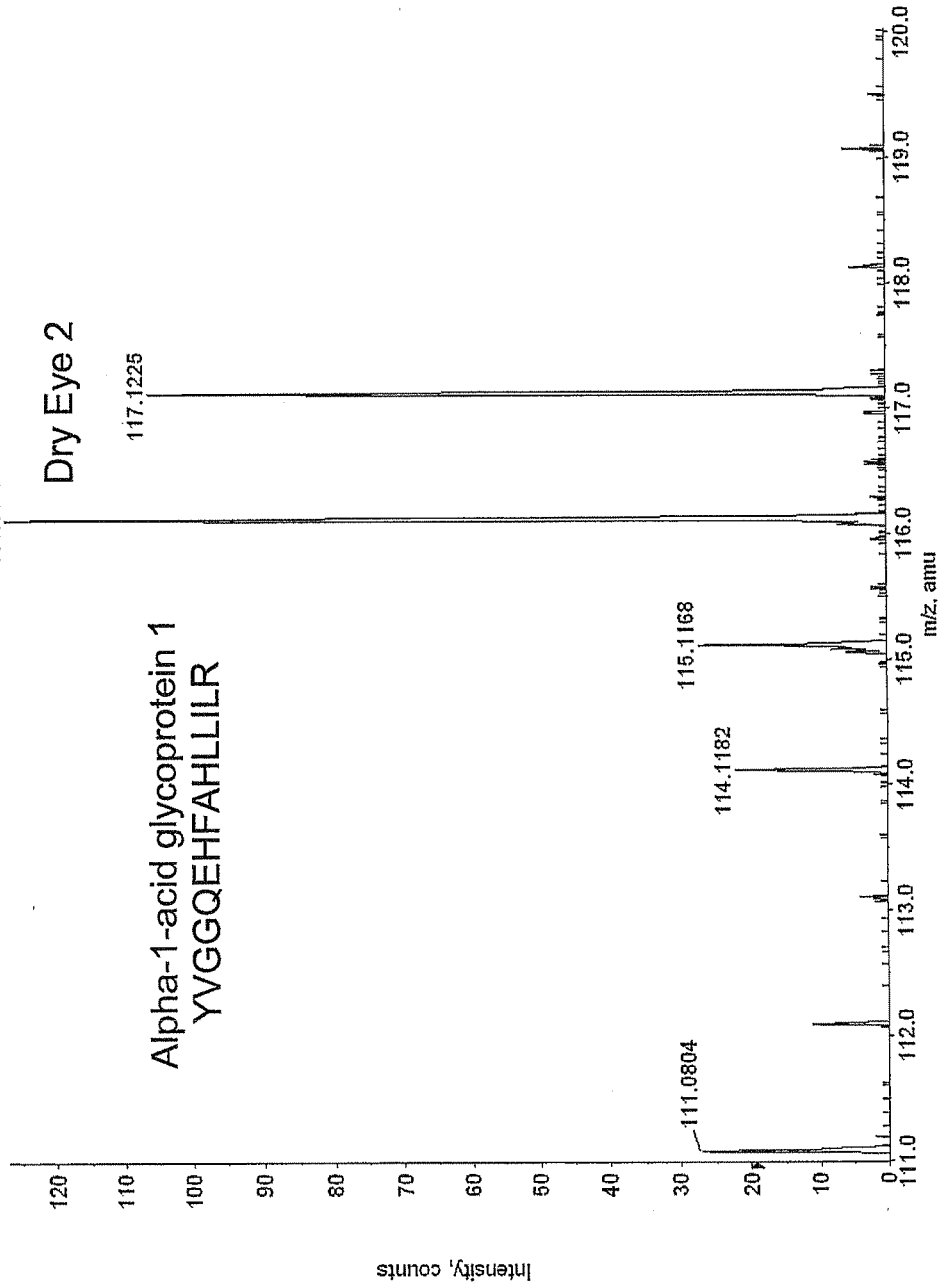

Dry Eye 1
Dry Eye 2
Alpha-1-acid glycoprotein 1
YVGGQEHFAHLLILR
116.1197
117.1225
115.1168
114.1182
111.0804
Intensity, counts
m/z, amu

FIG. 6A

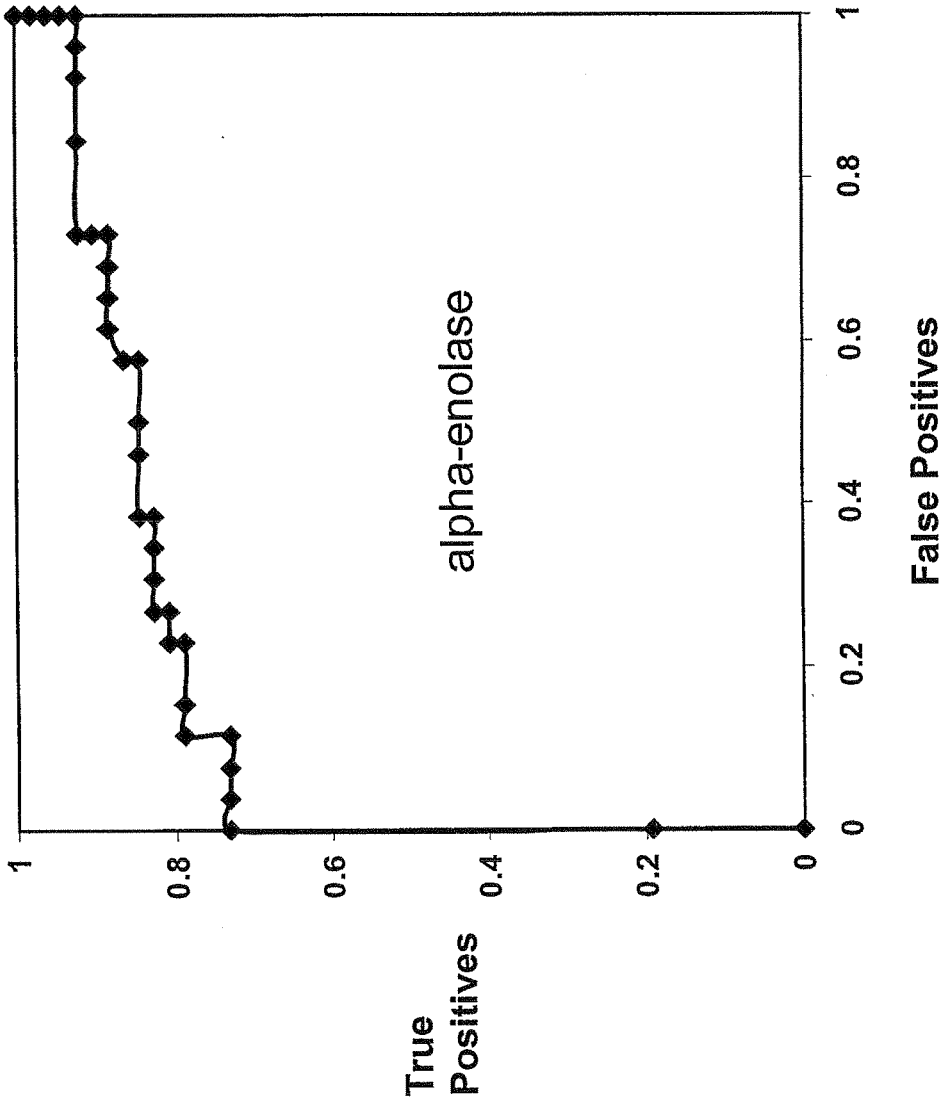


FIG. 6B

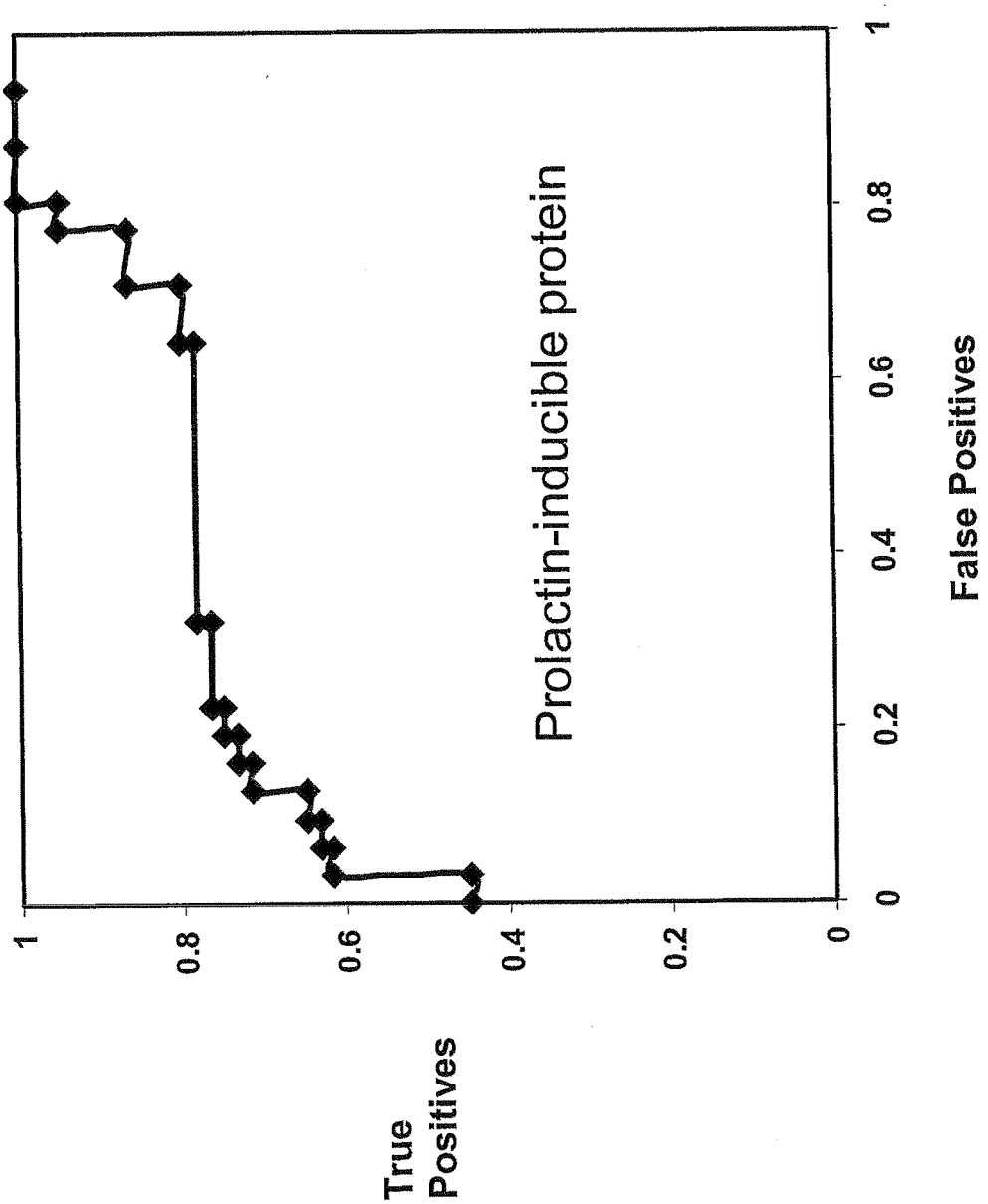

Prolactin-inducible protein
True Positives
False Positives
0
0.2
0.4
0.6
0.8
1

FIG. 6C

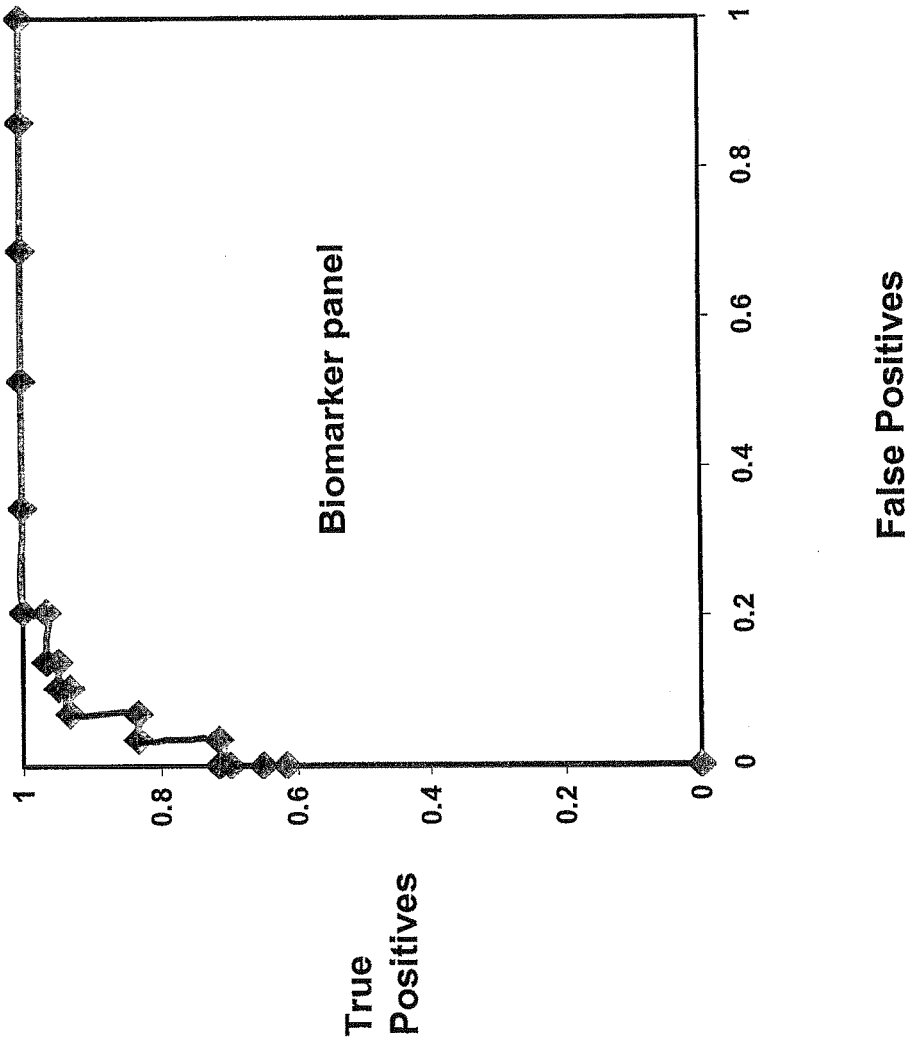

Biomarker panel
True Positives
False Positives
0
0.2
0.4
0.6
0.8
1

FIG. 7A

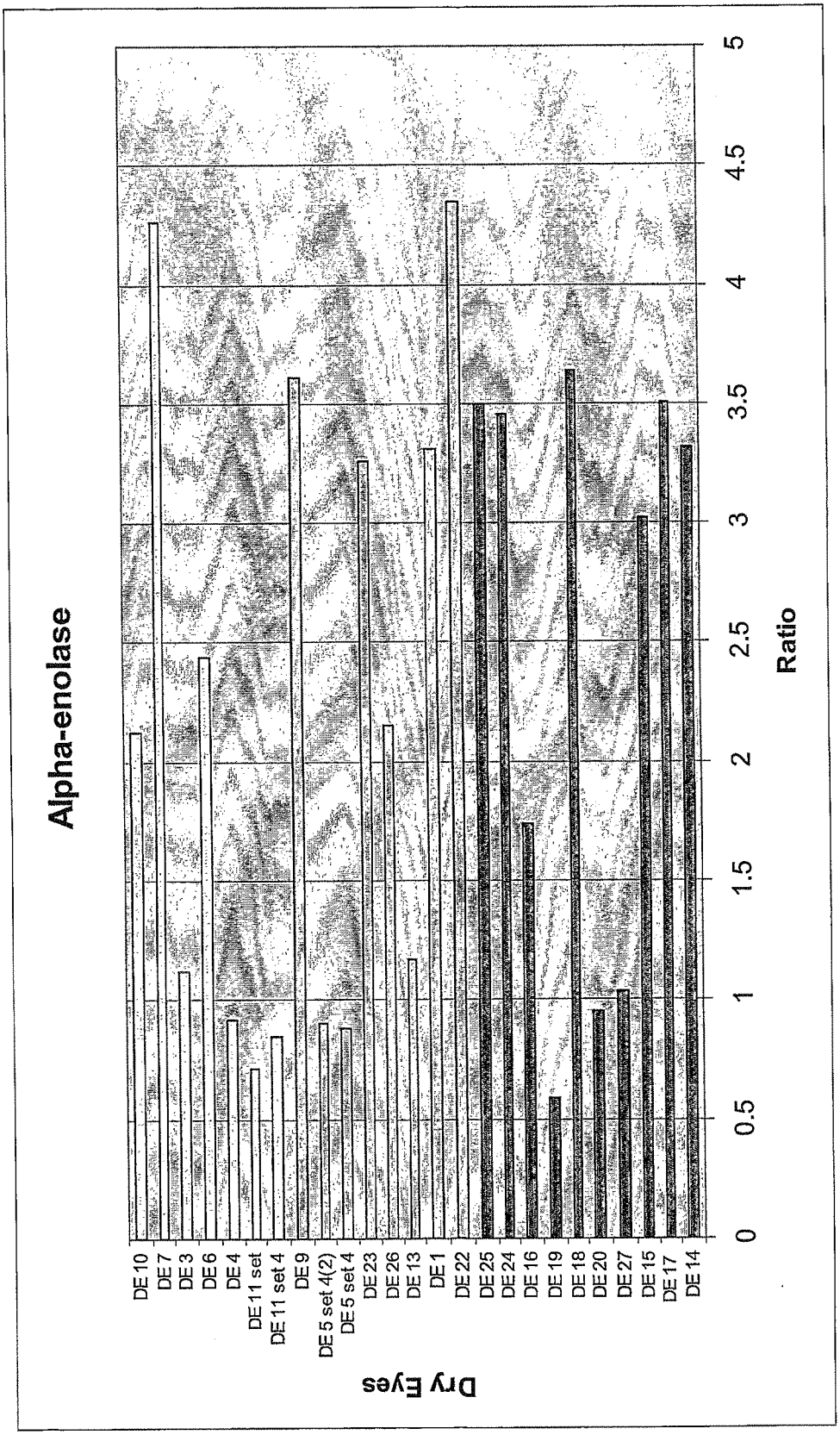

Alpha-enolase
Dry Eyes
DE 10
DE 7
DE 3
DE 6
DE 4
DE 11 set
DE 11 set 4
DE 9
DE 5 set 4(2)
DE 5 set 4
DE 23
DE 26
DE 13
DE 1
DE 22
DE 25
DE 24
DE 16
DE 19
DE 18
DE 20
DE 27
DE 15
DE 17
DE 14
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
Ratio

FIG. 7B

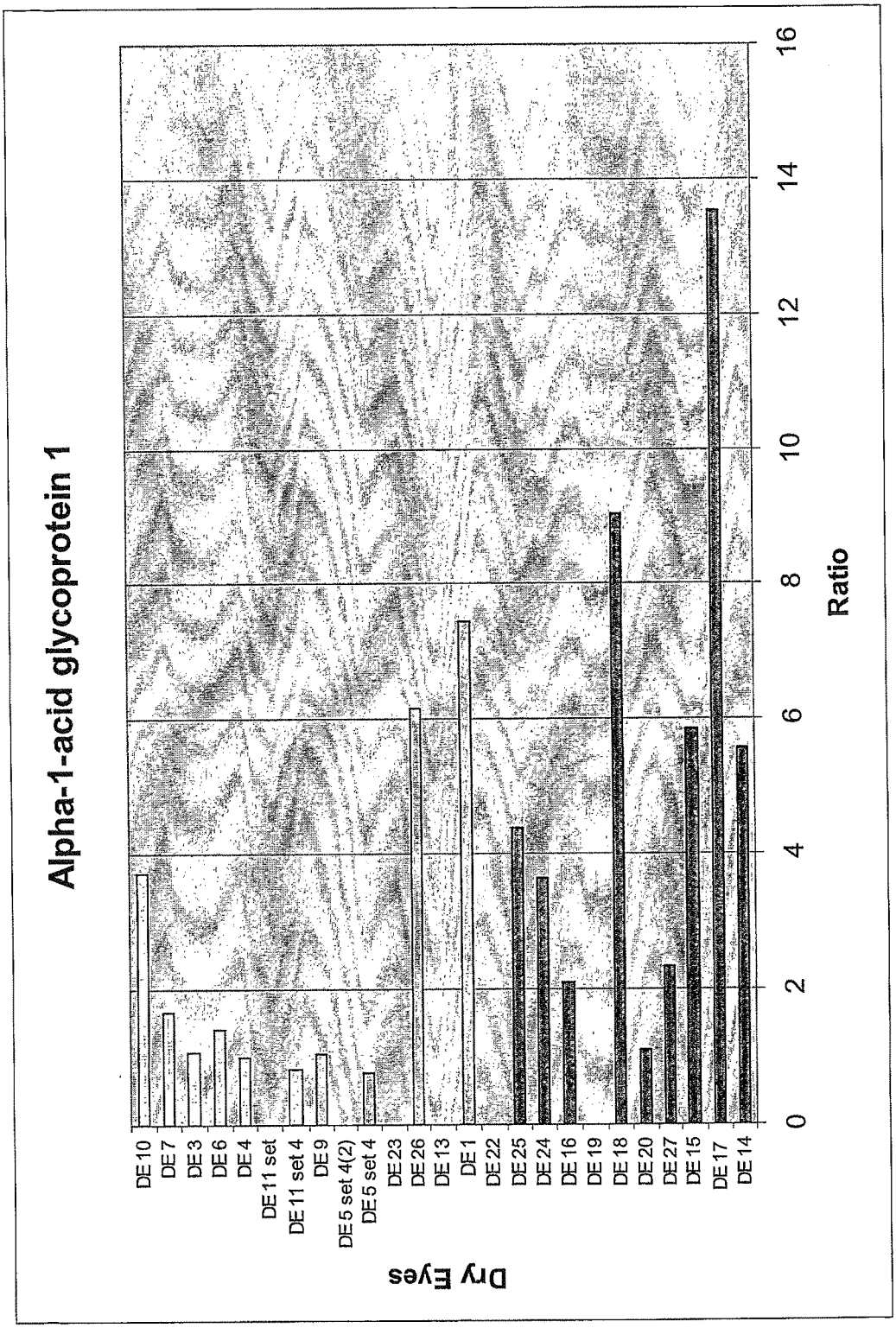

Alpha-1-acid glycoprotein 1
Dry Eyes
DE 10
DE 7
DE 3
DE 6
DE 4
DE 11 set
DE 11 set 4
DE 9
DE 5 set 4(2)
DE 5 set 4
DE 23
DE 26
DE 13
DE 1
DE 22
DE 25
DE 24
DE 16
DE 19
DE 18
DE 20
DE 27
DE 15
DE 17
DE 14
0
2
4
6
8
10
12
14
16
Ratio

FIG. 7C

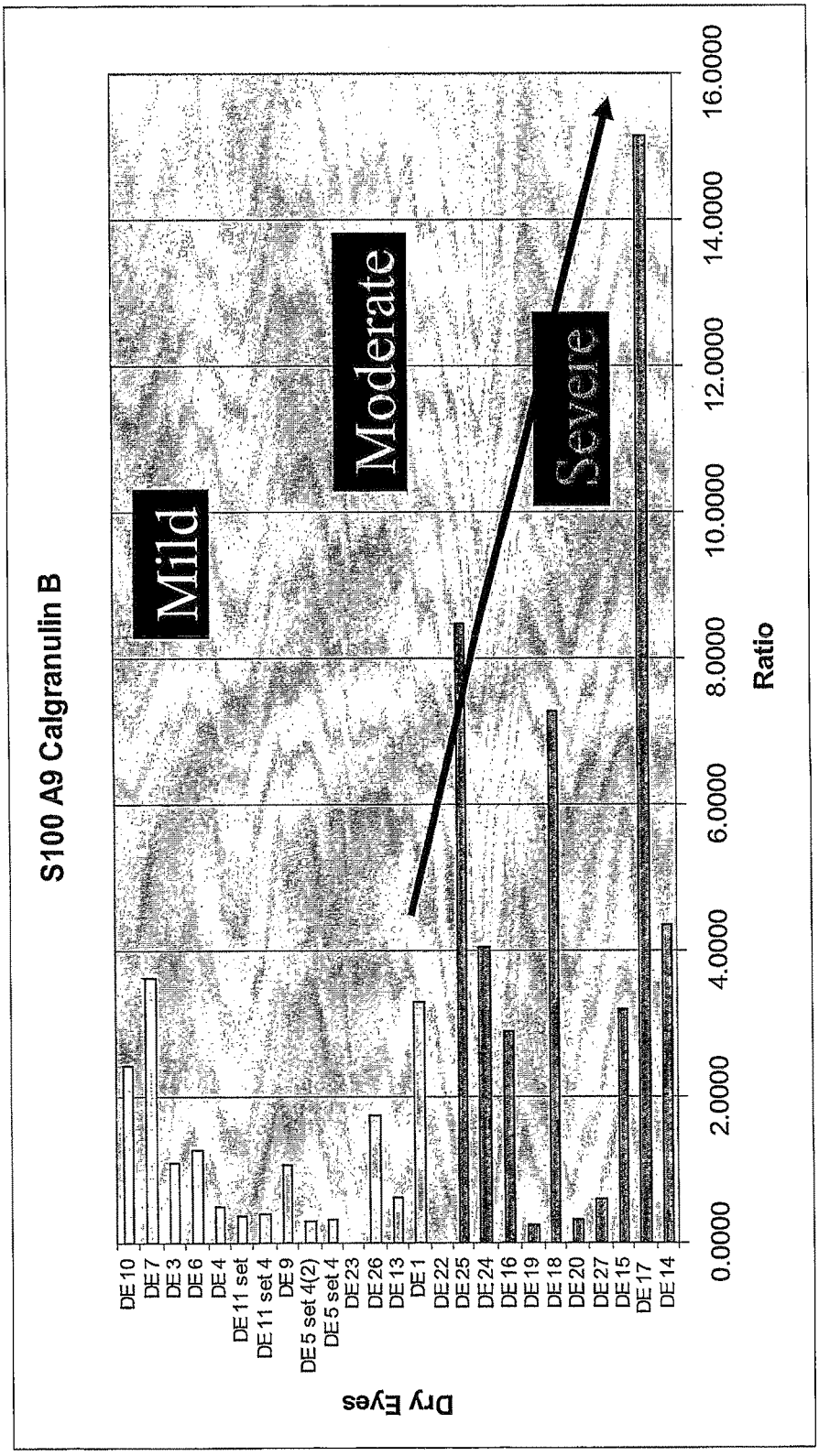

S100 A9 Calgranulin B
Mild
Moderate
Severe
Dry Eyes
DE 10
DE 7
DE 3
DE 6
DE 4
DE 11 set
DE 11 set 4
DE 9
DE 5 set 4(2)
DE 5 set 4
DE 23
DE 26
DE 13
DE 1
DE 22
DE 25
DE 24
DE 16
DE 19
DE 18
DE 20
DE 27
DE 15
DE 17
DE 14
0.0000
2.0000
4.0000
6.0000
8.0000
10.0000
12.0000
14.0000
16.0000
Ratio

FIG. 7D

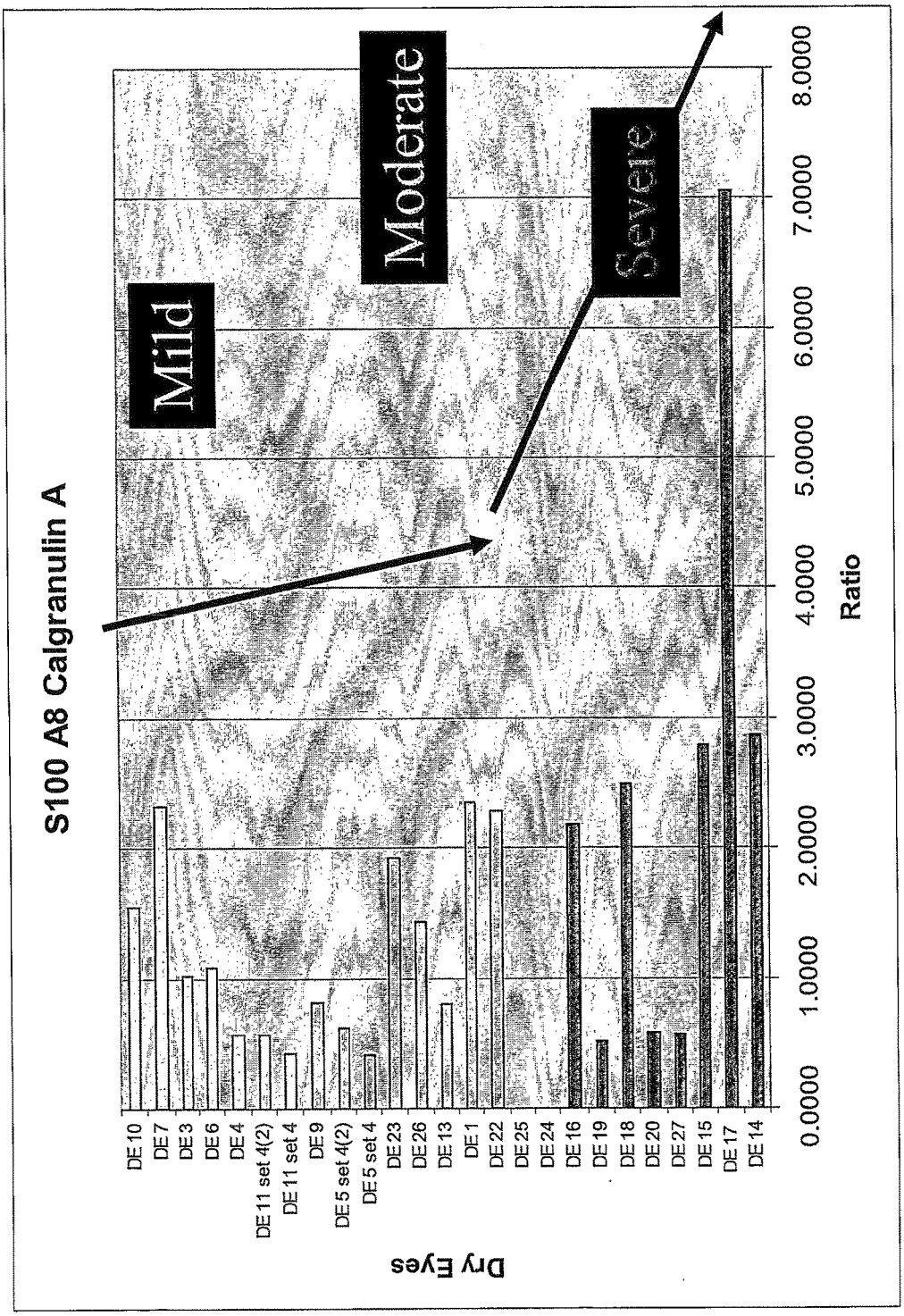
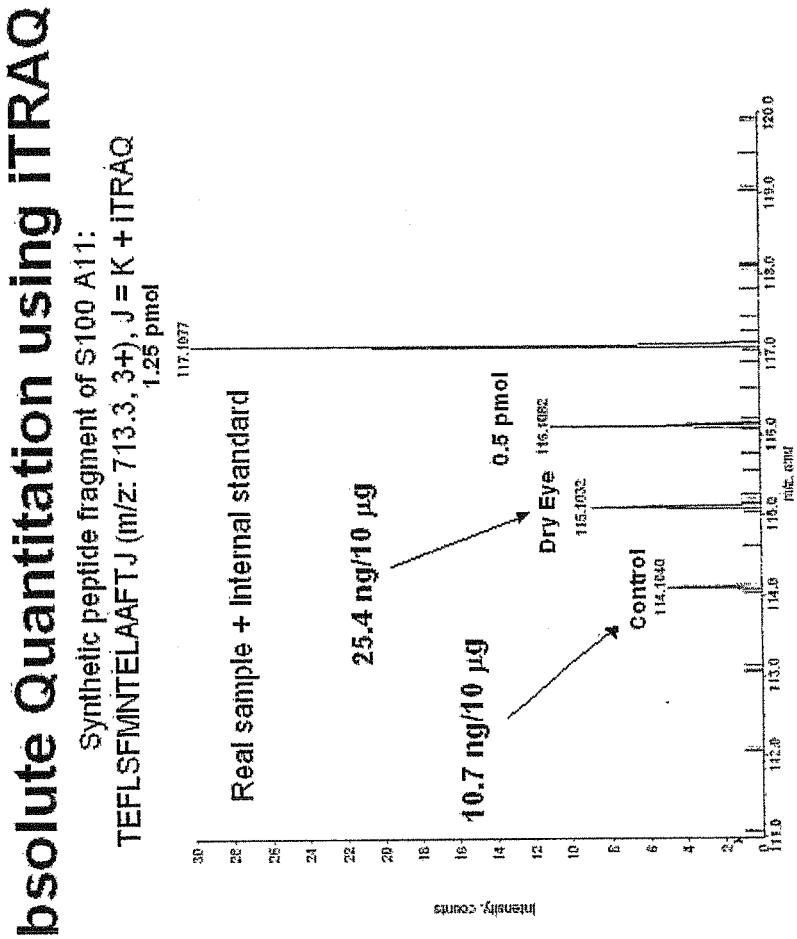

S100 A8 Calgranulin A
Mild
Moderate
Severe
Dry Eyes
DE 10
DE 7
DE 3
DE 6
DE 4
DE 11 set 4(2)
DE 11 set 4
DE 9
DE 5 set 4(2)
DE 5 set 4
DE 23
DE 26
DE 13
DE 1
DE 22
DE 25
DE 24
DE 16
DE 19
DE 18
DE 20
DE 27
DE 15
DE 17
DE 14
0.0000
1.0000
2.0000
3.0000
4.0000
5.0000
6.0000
7.0000
8.0000
Ratio

FIG. 8


Absolute Quantitation using iTRAQ
Synthetic peptide fragment of S100 A11:
TEFLSFMNTELAAFTJ (m/z: 713.3, 3+), J = K + iTRAQ
1.25 pmol
Real sample + internal standard
25.4 ng/10 µg
0.5 pmol
Dry Eye
10.7 ng/10 µg
Control
Intensity, counts

SEQUENCE LISTING

<110> Singapore Health Services Pte Ltd
Singapore Health Services Pte Ltd
Agency for Science, Technology and Research

<120> Mucosa Dryness Condition

<130> FP3647

<140> US 60/795676
<141> 2006-04-28

<160> 4

<170> PatentIn version 3.4

<210> 1
<211> 16
<212> PRT
<213> artificial

<220>
<223> artificial

<220>
<221> Xaa
<222> (16)..(16)
<223> iTRAQ-modified lysine residue

<400> 1

Thr Tyr Leu Ile Ser Ser Ile Pro Leu Gln Gly Ala Phe Asn Tyr Xaa
1 5 10 15

<210> 2
<211> 20
<212> PRT
<213> artificial

<220>
<223> artificial

<220>
<221> Xaa
<222> (20)..(20)
<223> iTRAQ-modified lysine residue

<400> 2

Ser Gly Glu Thr Glu Asp Phe Ile Ala Asp Leu Trp Gly Leu Cys Thr
1 5 10 15

Gly Gln Ile Xaa
20

<210> 3
<211> 15
<212> PRT
<213> artificial

<220>
<223> artificial

<400> 3

Tyr Val Gly Gly Gln Glu His Phe Ala His Leu Leu Ile Leu Arg
1 5 10 15

<210> 4
<211> 16
<212> PRT
<213> artificial

<220>
<223> artificial

<220>
<221> Xaa
<222> (16)..(16)
<223> iTRAQ-modified lysine residue

<400> 4

Thr Glu Phe Leu Ser Phe Met Asn Thr Glu Leu Ala Ala Phe Thr Xaa
1 5 10 15