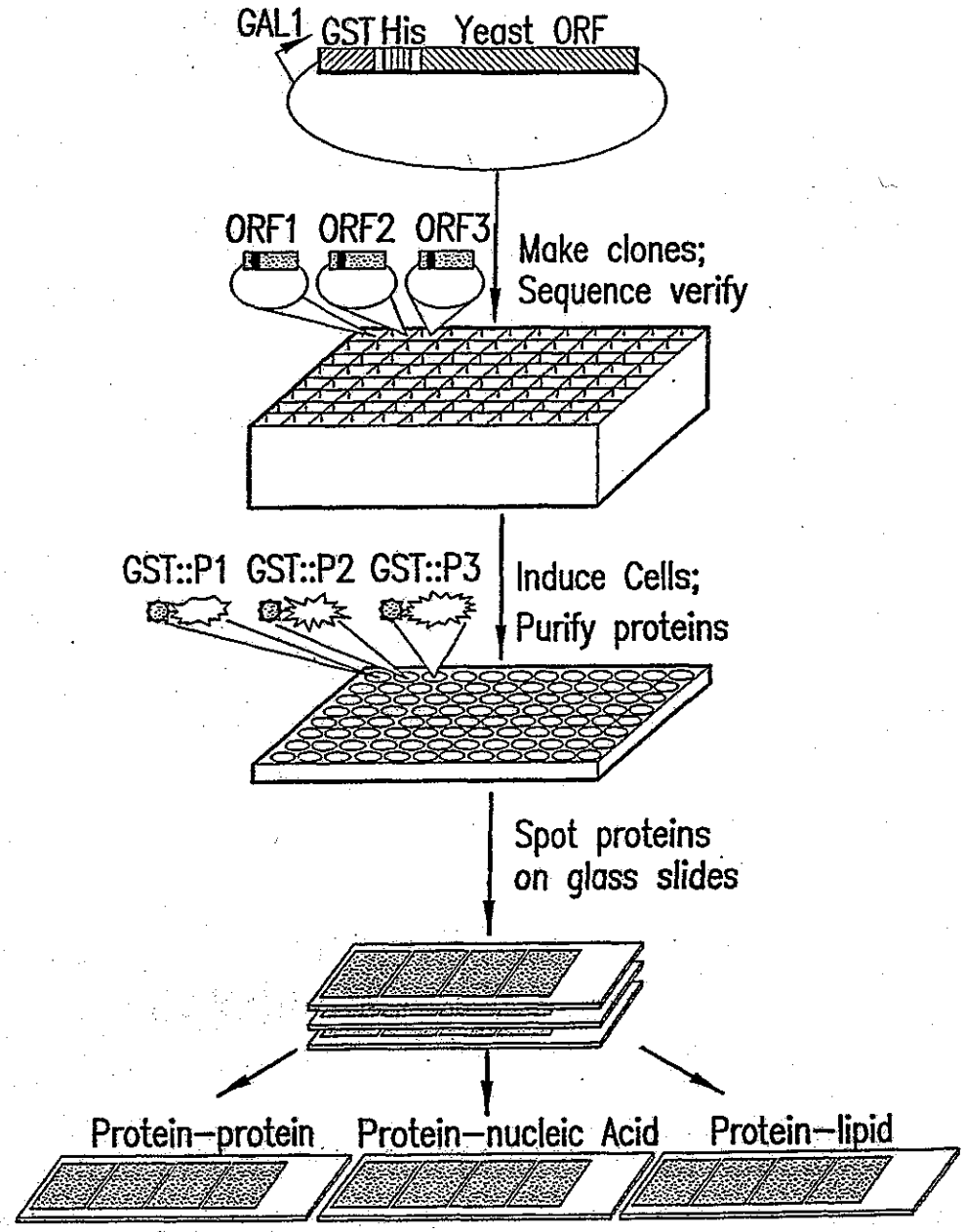
GAL1
GST His Yeast ORF
ORF1 ORF2 ORF3
Make clones;
Sequence verify
GST::P1 GST::P2 GST::P3
Induce Cells;
Purify proteins
Spot proteins
on glass slides
Protein–protein
Protein–nucleic Acid
Protein–lipid

FIG. 1A

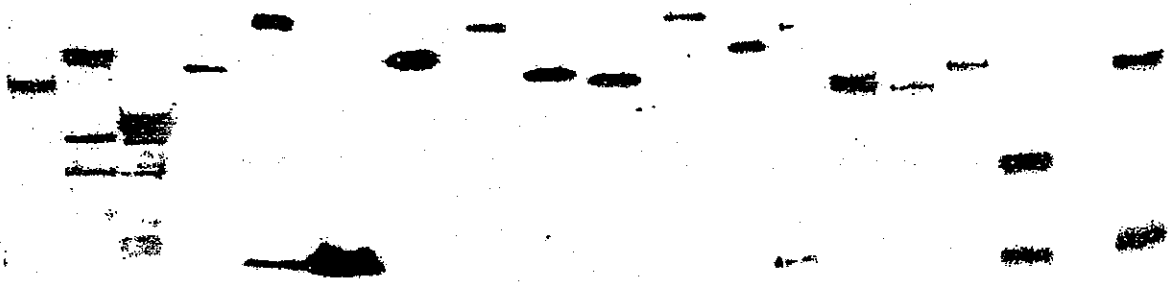

FIG.1B

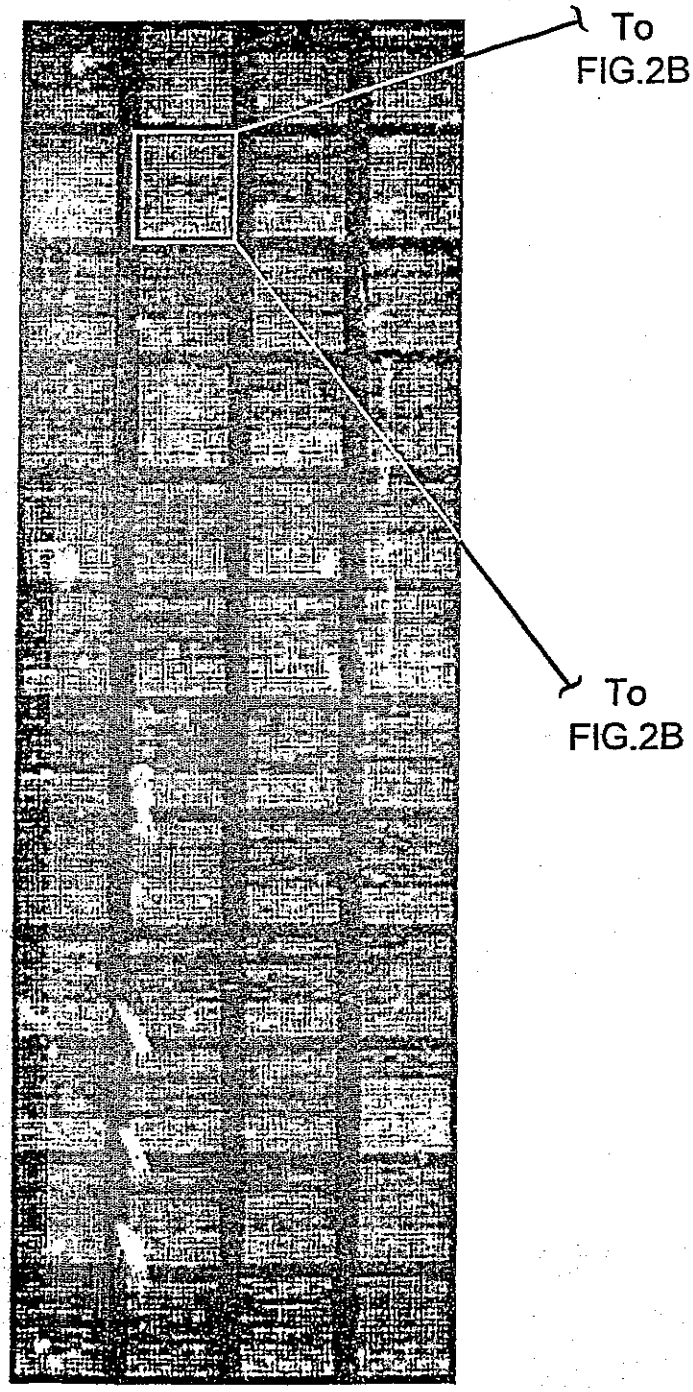

FIG.2A

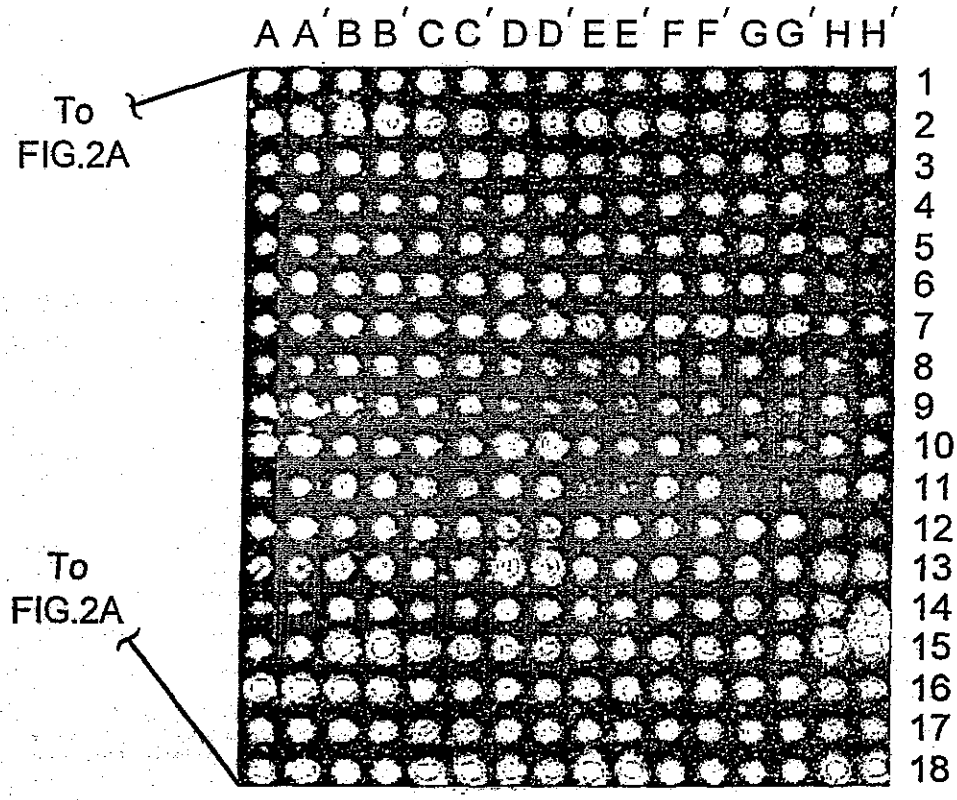
A A' B B' C C' D D' E E' F F' G G' H H'
To FIG.2A
To FIG.2A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

FIG.2B

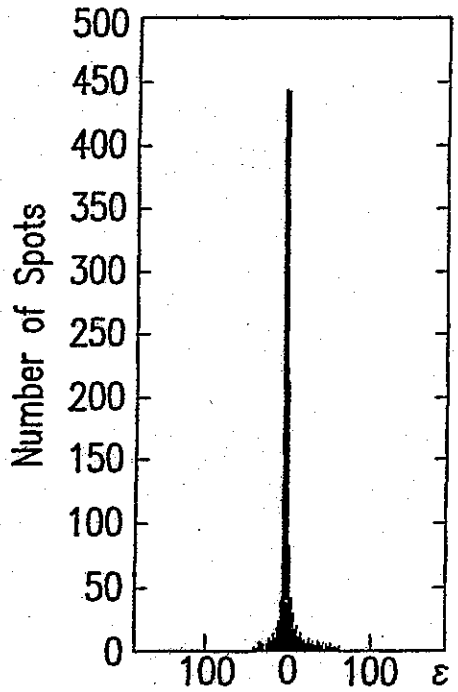
500
450
400
350
300
250
200
150
100
50
0
Number of Spots
100
0
100
ε

FIG.2C

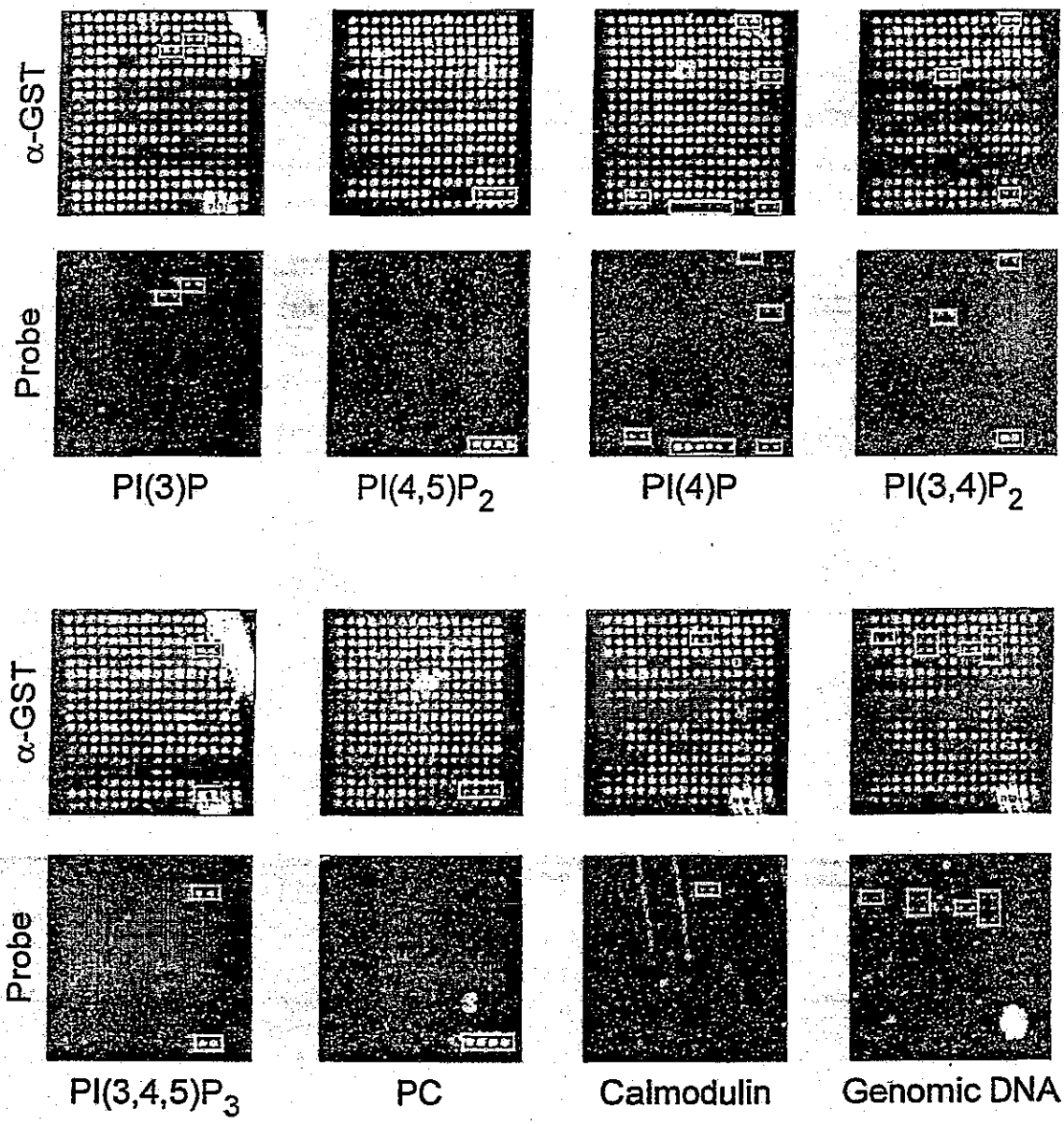
α-GST
Probe
PI(3)P
PI(4,5)P2
PI(4)P
PI(3,4)P2
α-GST
Probe
PI(3,4,5)P3
PC
Calmodulin
Genomic DNA

FIG.3A

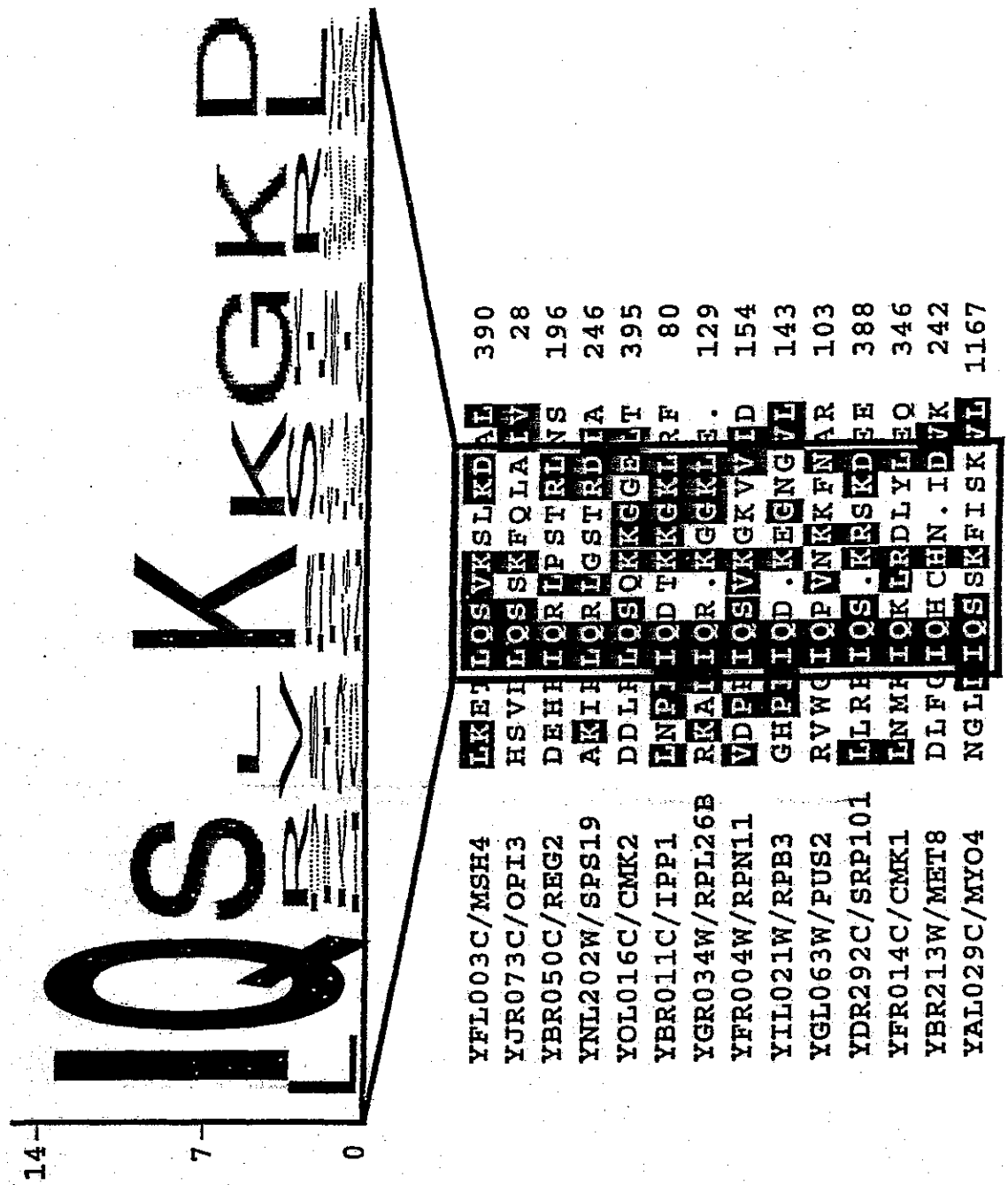
14
7
0
YFL003C/MSH4 390
YJR073C/OPI3 28
YBR050C/REG2 196
YNL202W/SPS19 246
YOL016C/CMK2 395
YBR011C/IPP1 80
YGR034W/RPL26B 129
YFR004W/RPN11 154
YIL021W/RPB3 143
YGL063W/PUS2 103
YDR292C/SRP101 388
YFR014C/CMK1 346
YBR213W/MET8 242
YAL029C/MYO4 1167

FIG.3B

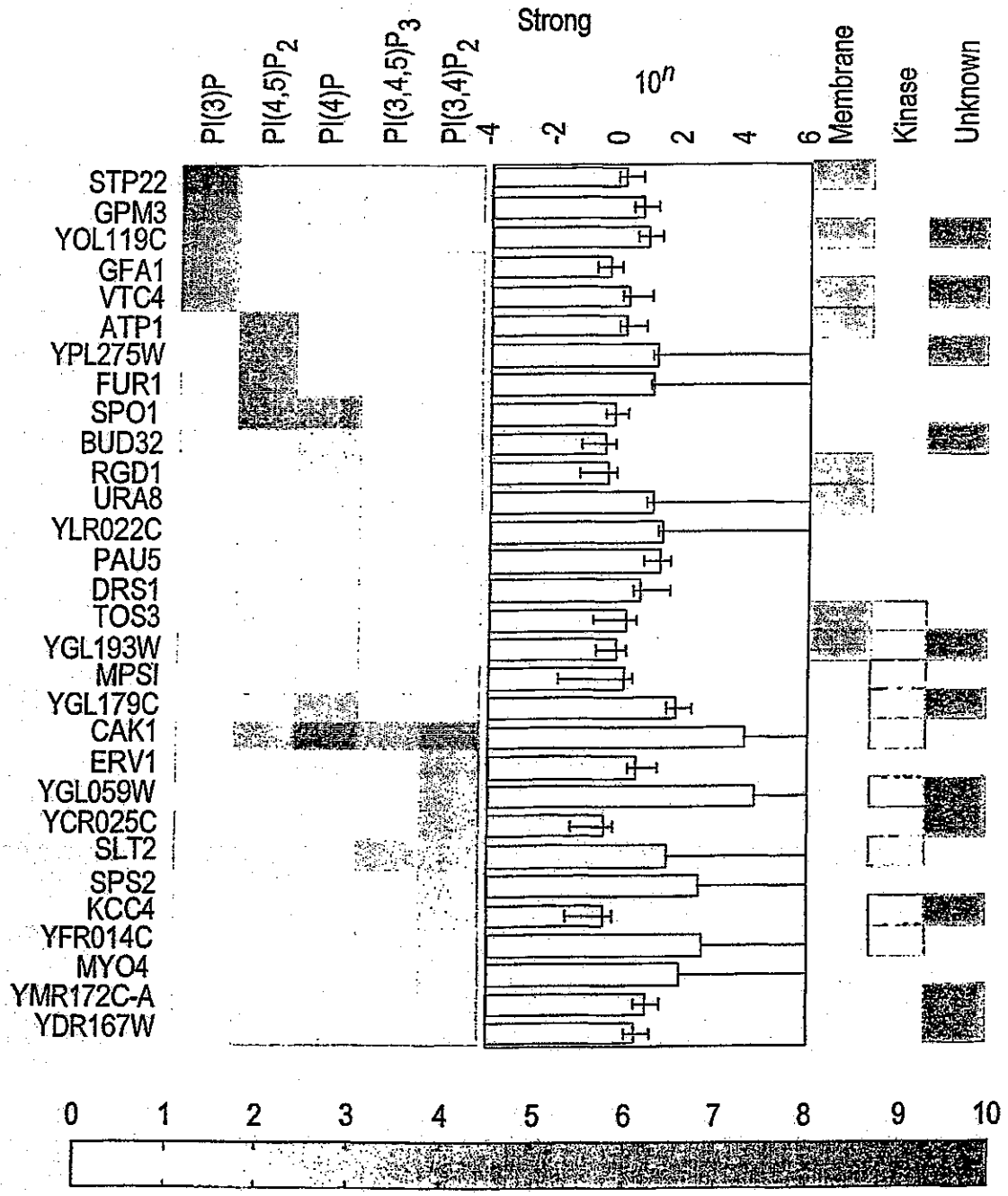
PI(3)P
PI(4,5)P2
PI(4)P
PI(3,4,5)P3
PI(3,4)P2
Strong
10n
-4
-2
0
2
4
6
Membrane
Kinase
Unknown
STP22
GPM3
YOL119C
GFA1
VTC4
ATP1
YPL275W
FUR1
SPO1
BUD32
RGD1
URA8
YLR022C
PAU5
DRS1
TOS3
YGL193W
MPS1
YGL179C
CAK1
ERV1
YGL059W
YCR025C
SLT2
SPS2
KCC4
YFR014C
MYO4
YMR172C-A
YDR167W
0 1 2 3 4 5 6 7 8 9 10

FIG.4A

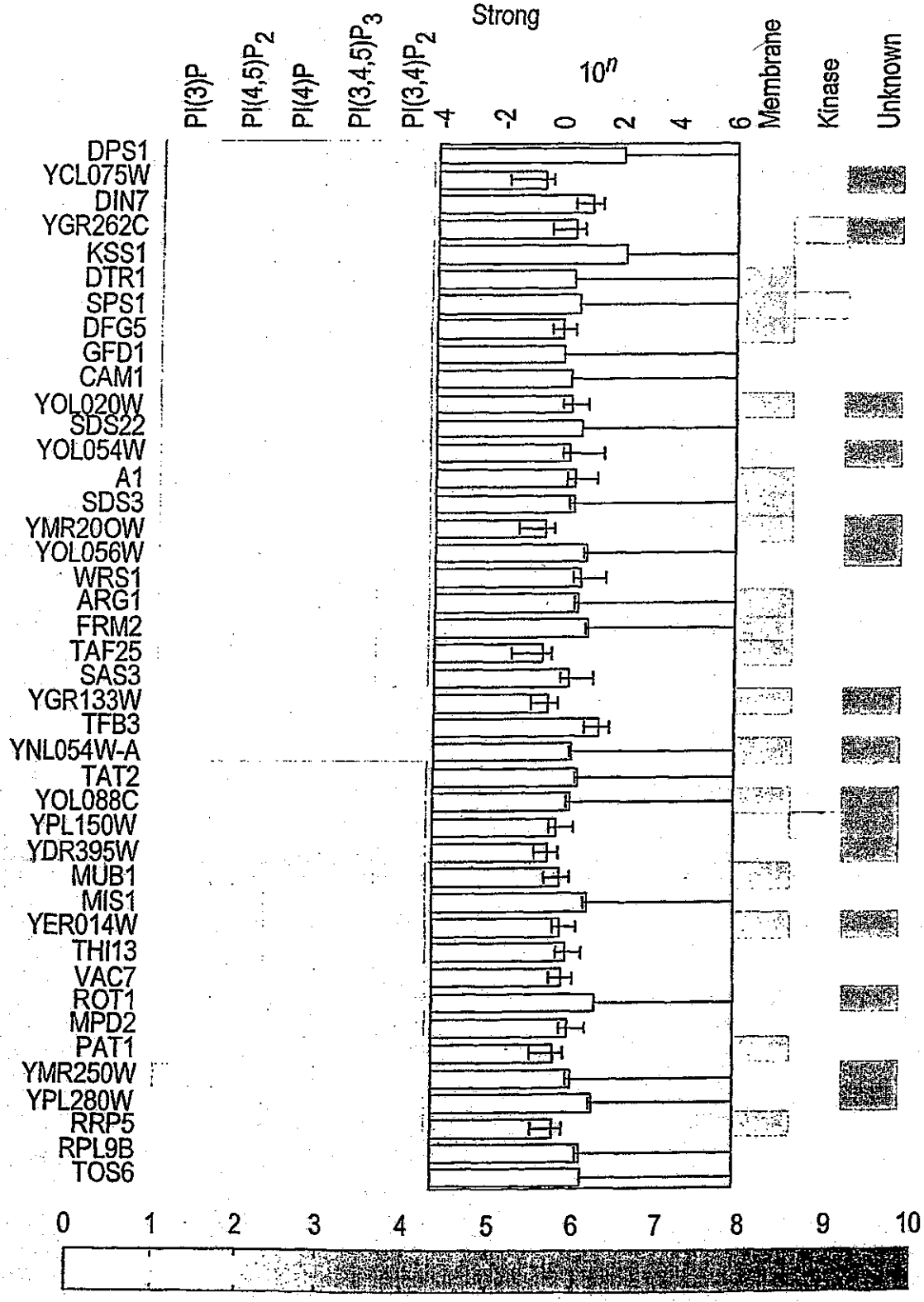
Strong
PI(3)P
PI(4,5)P2
PI(4)P
PI(3,4,5)P3
PI(3,4)P2
10n
-4
-2
0
2
4
6
Membrane
Kinase
Unknown
DPS1
YCL075W
DIN7
YGR262C
KSS1
DTR1
SPS1
DFG5
GFD1
CAM1
YOL020W
SDS22
YOL054W
A1
SDS3
YMR200W
YOL056W
WRS1
ARG1
FRM2
TAF25
SAS3
YGR133W
TFB3
YNL054W-A
TAT2
YOL088C
YPL150W
YDR395W
MUB1
MIS1
YER014W
THI13
VAC7
ROT1
MPD2
PAT1
YMR250W
YPL280W
RRP5
RPL9B
TOS6
0
1
2
3
4
5
6
7
8
9
10

FIG.4B

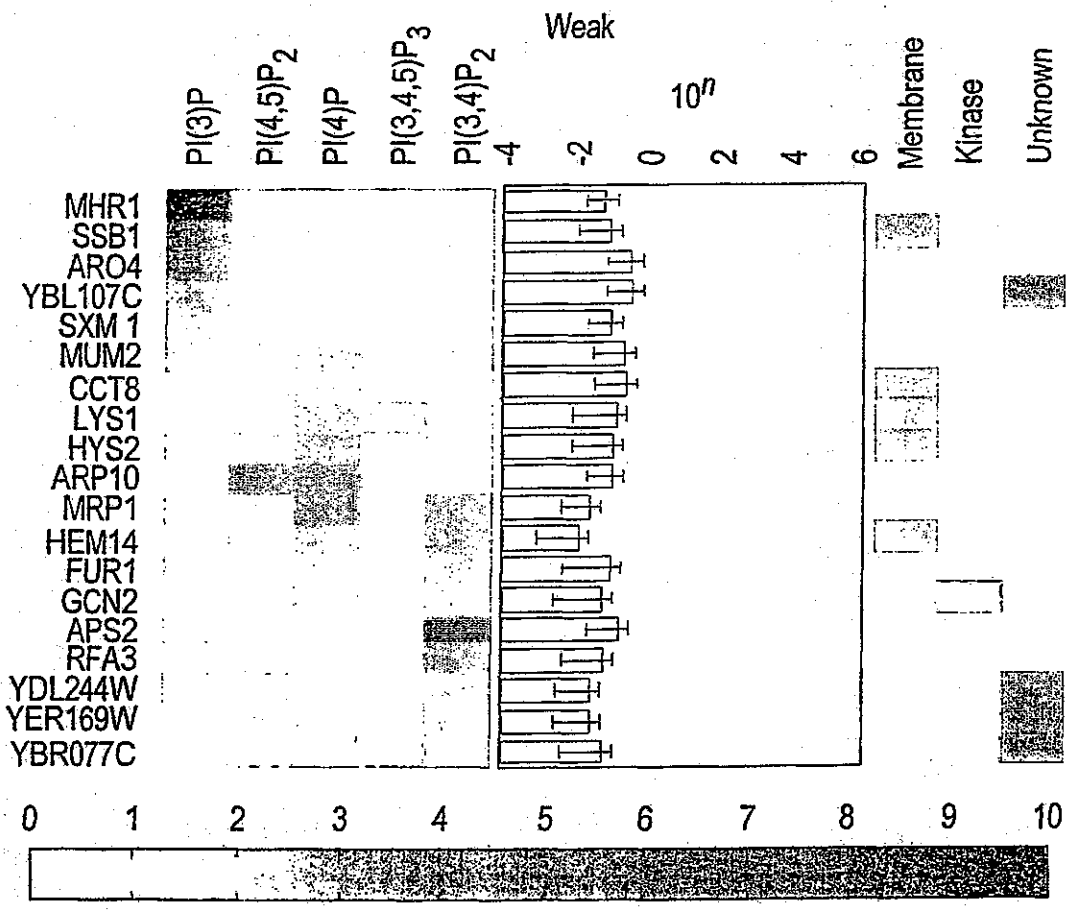
Weak
PI(3)P
PI(4,5)P2
PI(4)P
PI(3,4,5)P3
PI(3,4)P2
10n
-4
-2
0
2
4
6
Membrane
Kinase
Unknown
MHR1
SSB1
ARO4
YBL107C
SXM1
MUM2
CCT8
LYS1
HYS2
ARP10
MRP1
HEM14
FUR1
GCN2
APS2
RFA3
YDL244W
YER169W
YBR077C
0
1
2
3
4
5
6
7
8
9
10

FIG.4C

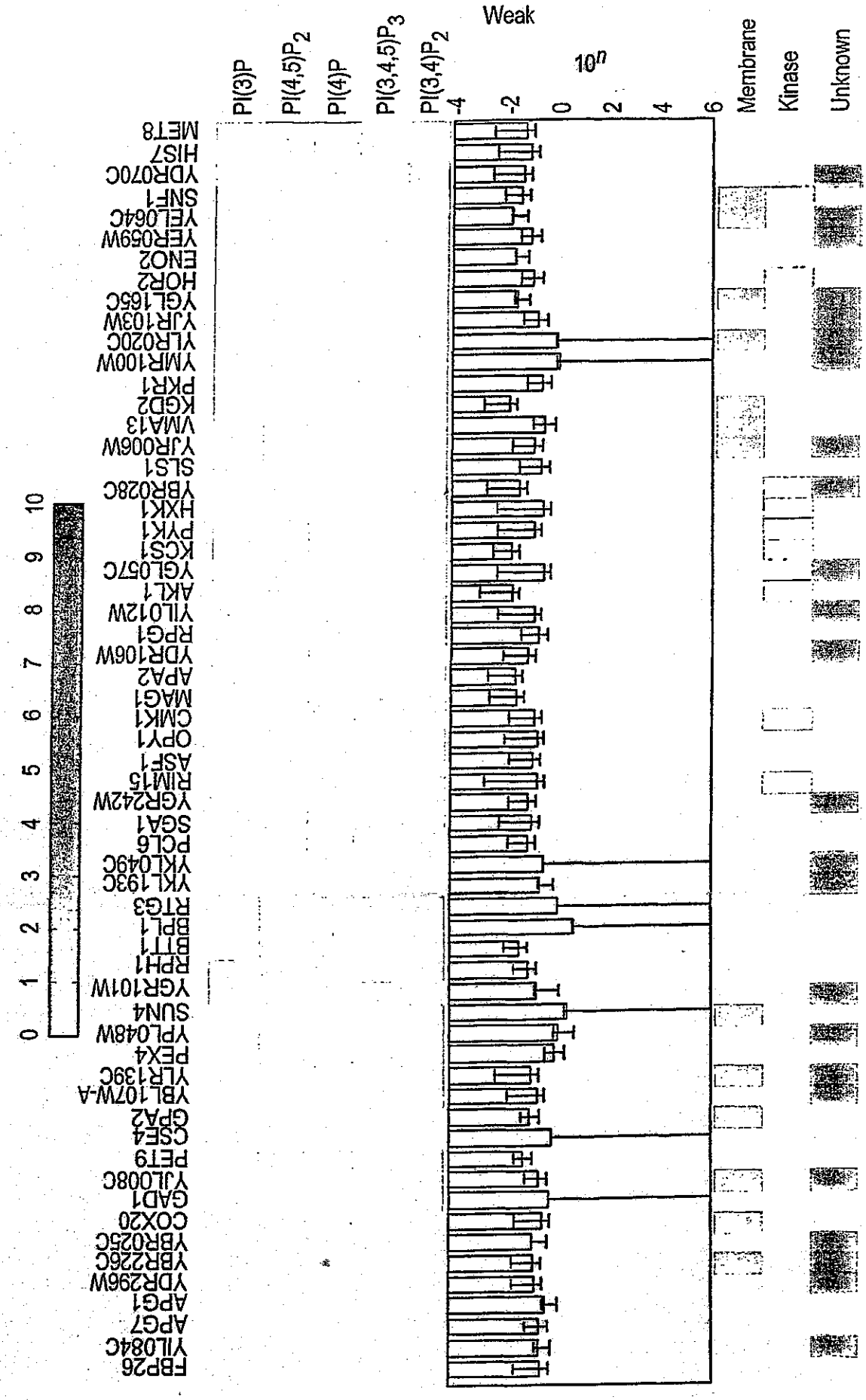
PI(3)P
PI(4,5)P2
PI(4)P
PI(3,4,5)P3
PI(3,4)P2
Weak
10n
-4
-2
0
2
4
6
Membrane
Kinase
Unknown
0 1 2 3 4 5 6 7 8 9 10
MET8
HIS7
YDR070C
SNF1
YEL064C
YER059W
ENO2
HOR2
YGL165C
YJR103W
YLR020C
YMR100W
PKR1
KGD2
VMA13
YJR006W
SLS1
YBR028C
HXK1
PYK1
KCS1
YGL057C
AKL1
YIL012W
RPG1
YDR106W
APA2
MAG1
CMK1
OPY1
ASF1
RIM15
YGR242W
SGA1
PCL6
YKL049C
YKL193C
RTG3
BPL1
BTT1
RPH1
YGR101W
SUN4
YPL048W
PEX4
YLR139C
YBL107W-A
GPA2
CSE4
PET9
YJL008C
GAD1
COX20
YBR025C
YBR226C
YDR296W
APG1
APG7
YIL084C
FBP26

FIG.4D

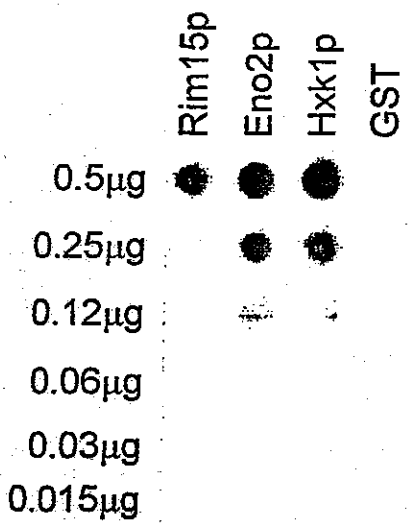
Rim15p
Eno2p
Hxk1p
GST
0.5µg
0.25µg
0.12µg
0.06µg
0.03µg
0.015µg

FIG.5A

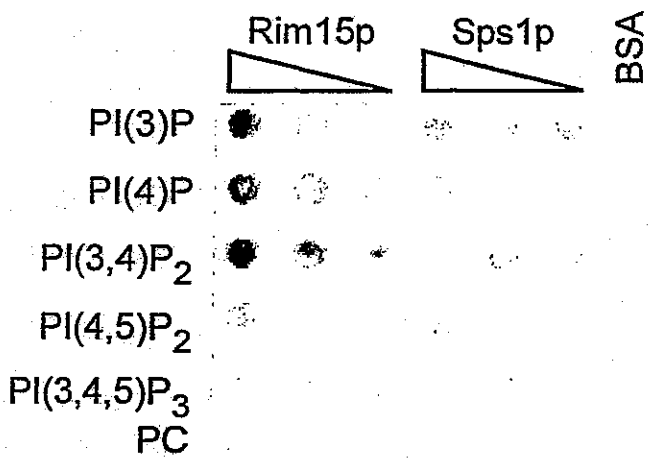
Rim15p
Sps1p
BSA
PI(3)P
PI(4)P
PI(3,4)P2
PI(4,5)P2
PI(3,4,5)P3
PC

FIG.5B

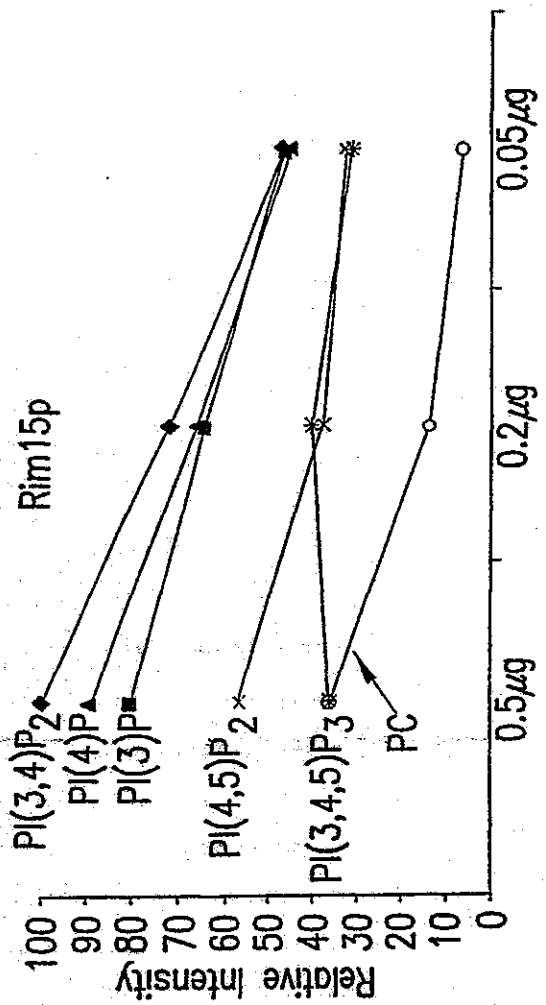
Relative Intensity
100
90
80
70
60
50
40
30
20
10
0
0.5μg
0.2μg
0.05μg
Rim15p
PI(3,4)P2
PI(4)P
PI(3)P
PI(4,5)P2
PI(3,4,5)P3
PC

FIG.5C