Figure 1A

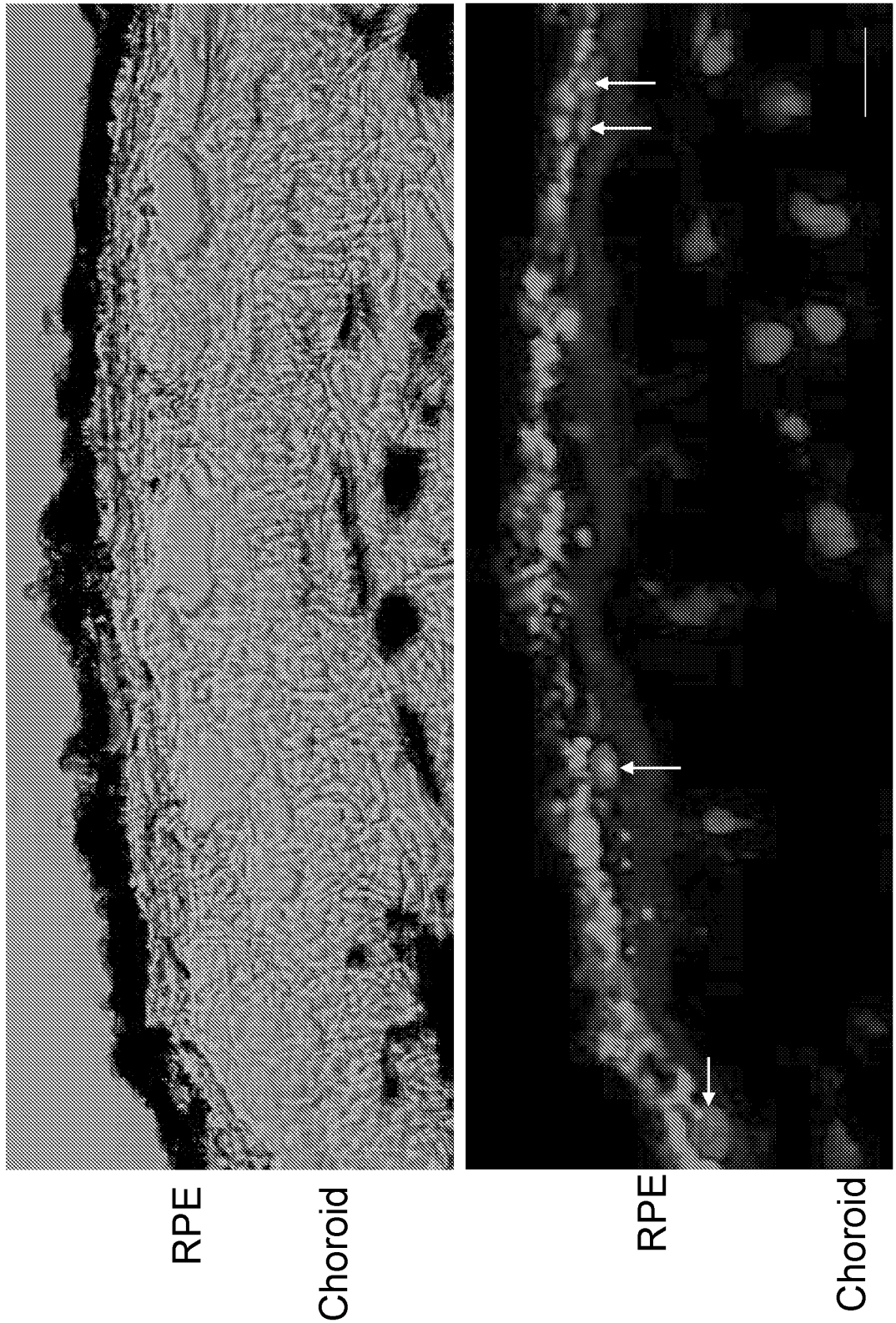


Figure 1B

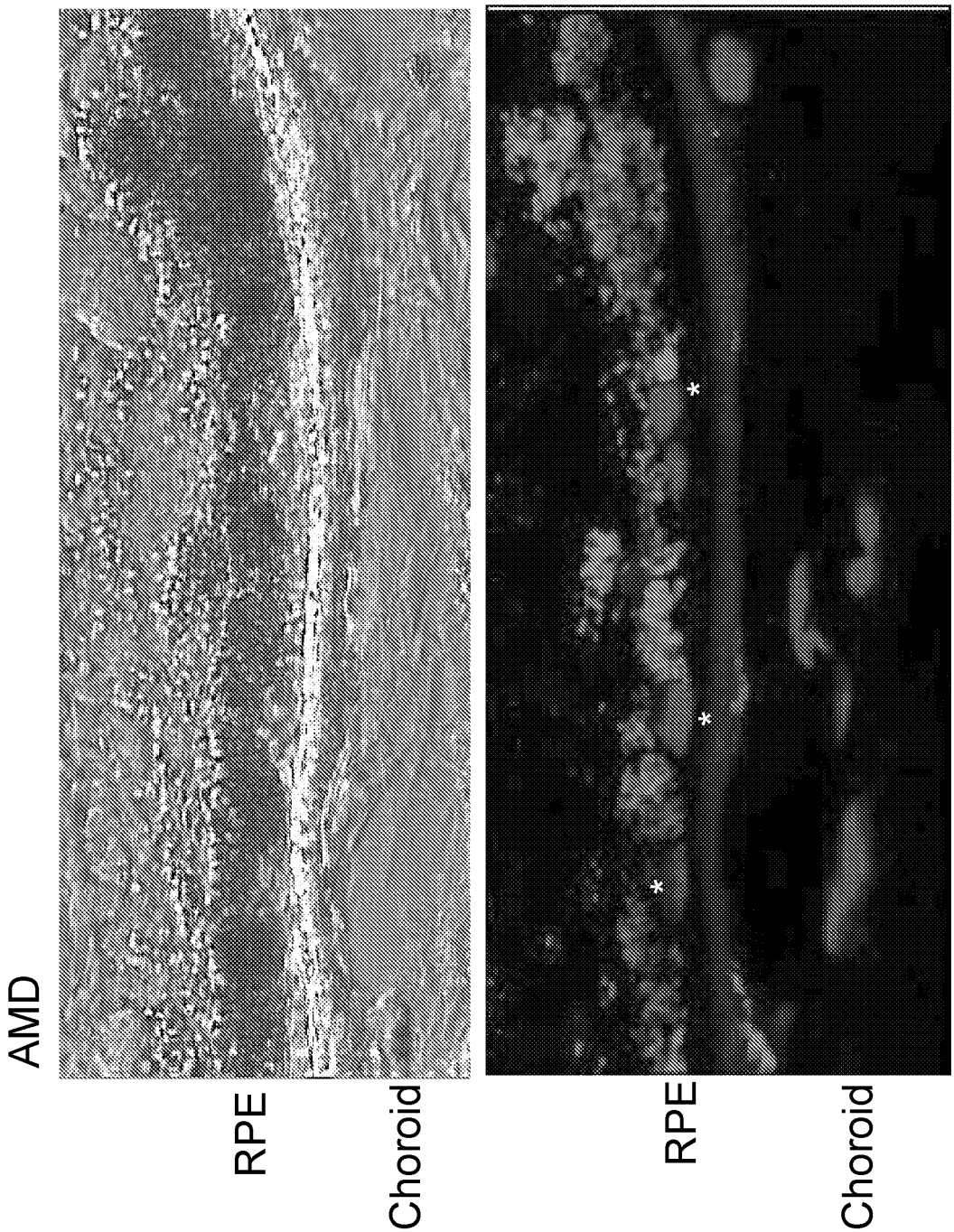


Figure 1C

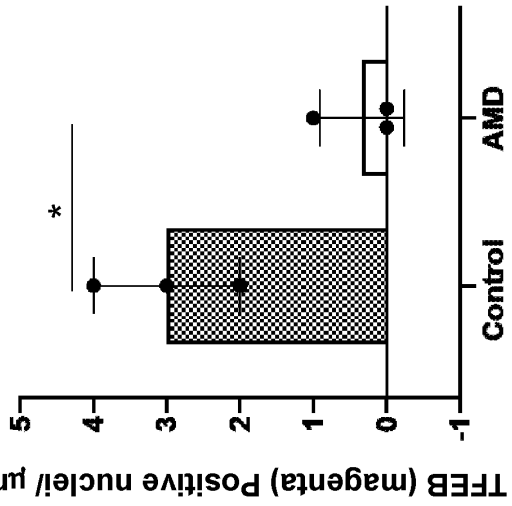


Figure 2A

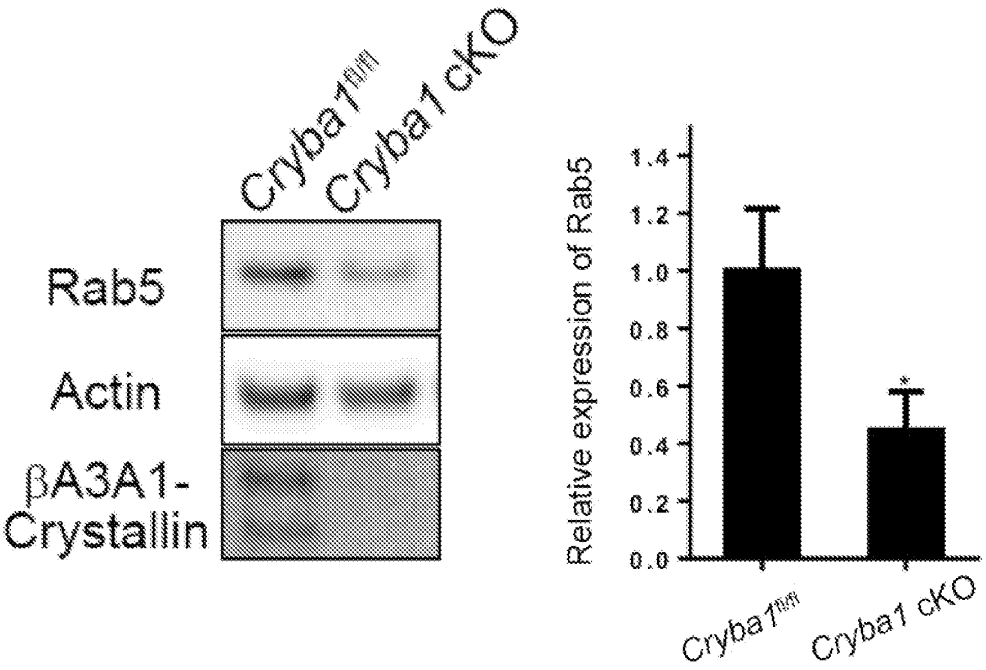


Figure 2B

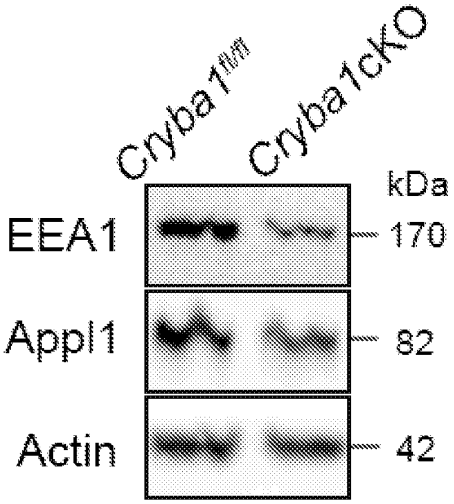


Figure 3A

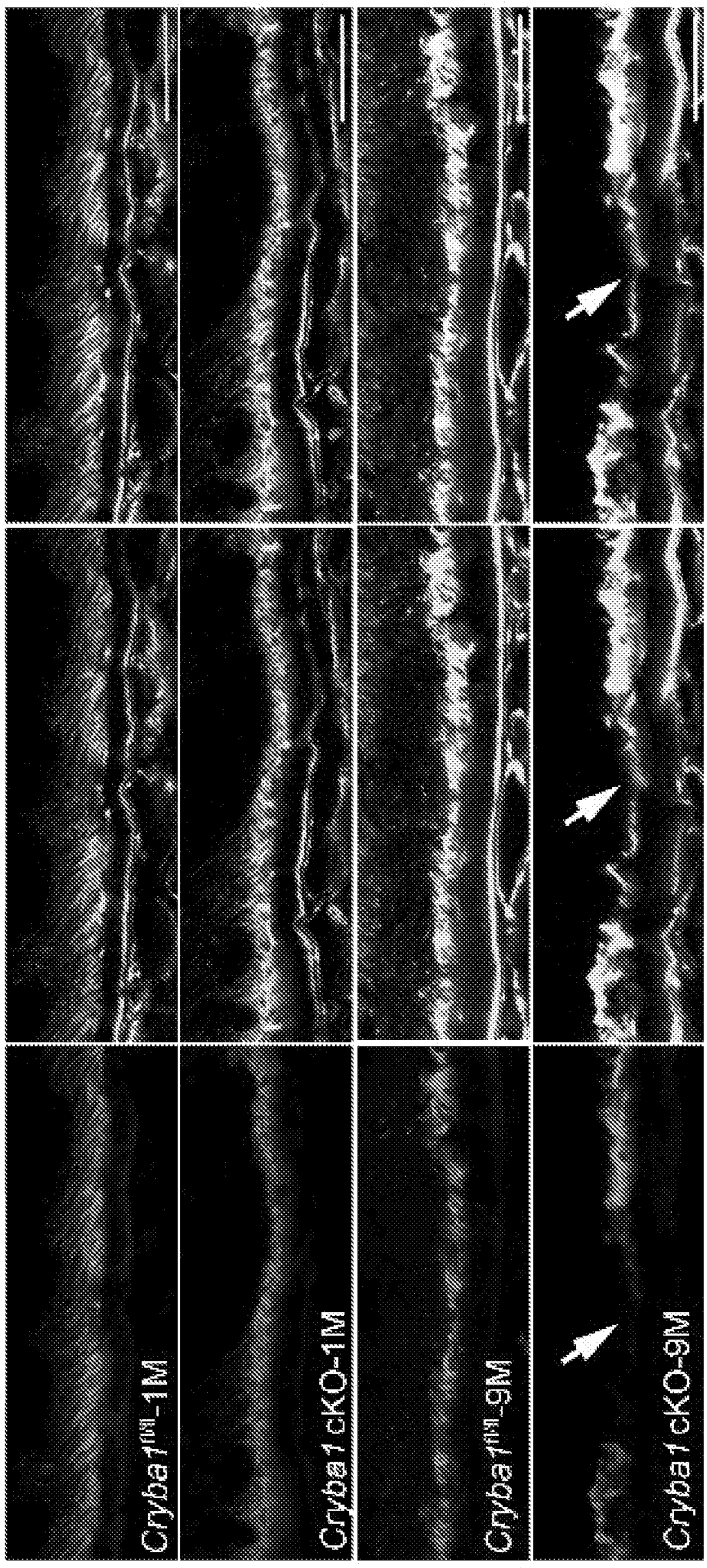

EBP50
Phalloidin
Merge
Cryba1fl/fl-1M
Cryba1 cKO-1M
Cryba1fl/fl-9M
Cryba1 cKO-9M

Figure 3B

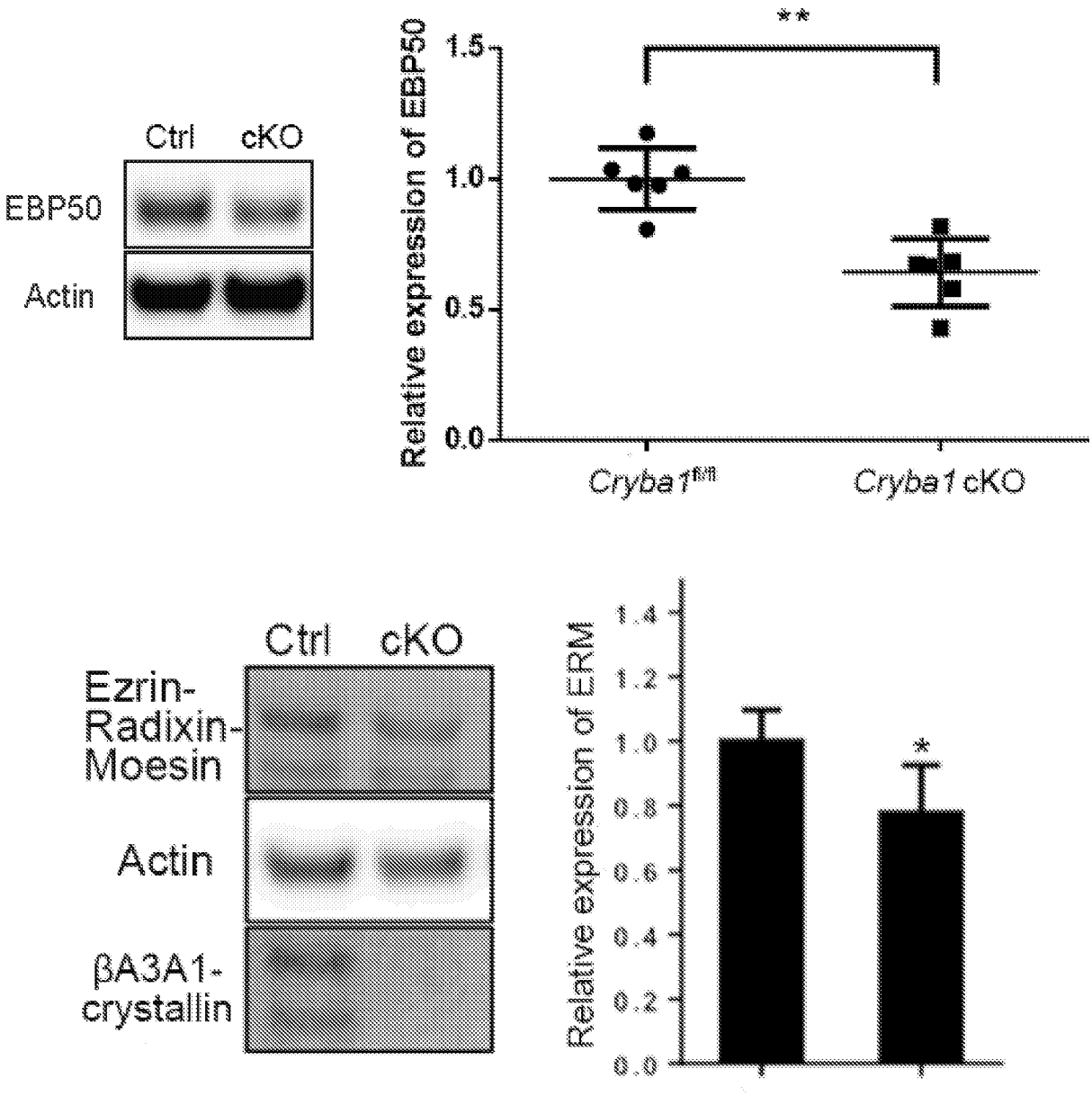

Ctrl
cKO
EBP50
Actin
Relative expression of EBP50
1.5
1.0
0.5
0.0
**
Cryba1fl/fl
Cryba1 cKO
Ctrl
cKO
Ezrin-
Radixin-
Moesin
Actin
βA3A1-
crystallin
Relative expression of ERM
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
*

Figure 3C

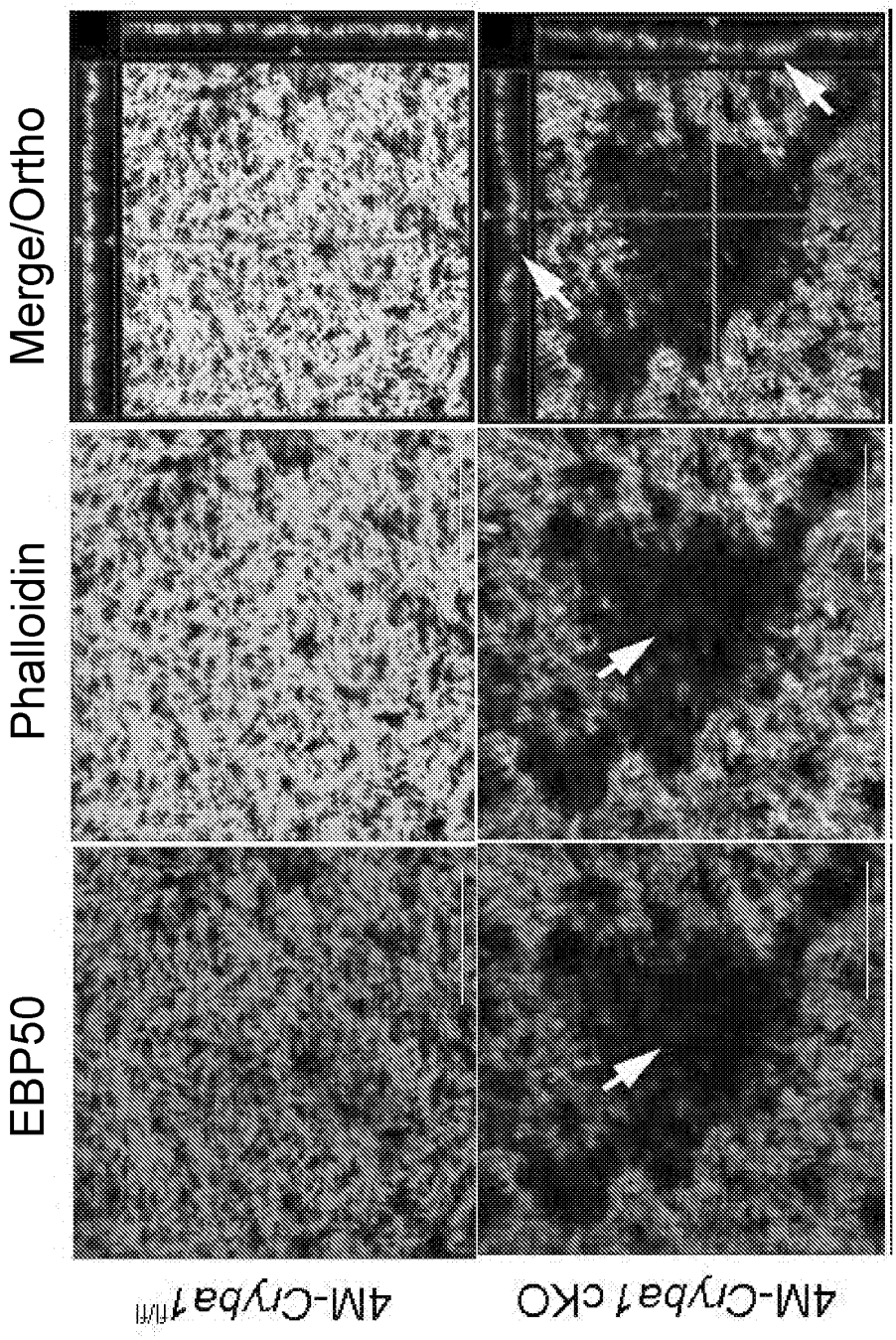


Figure 4

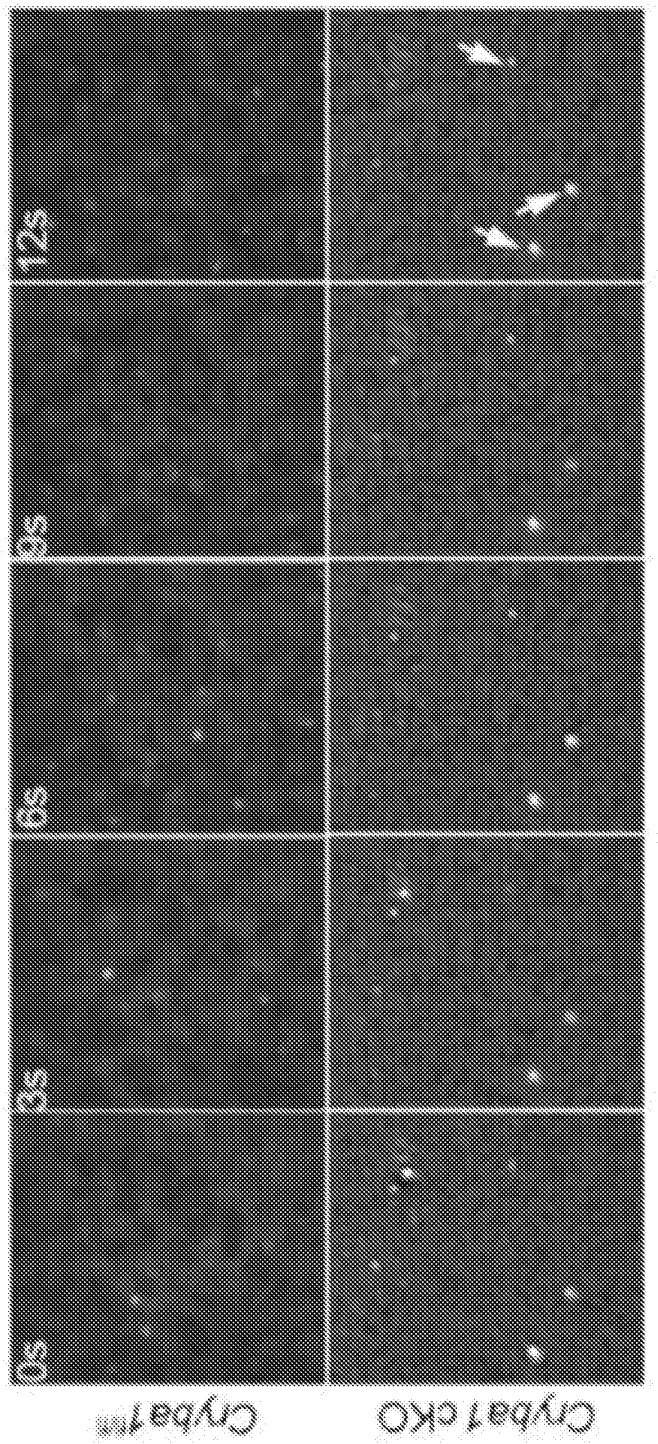


Figure 5

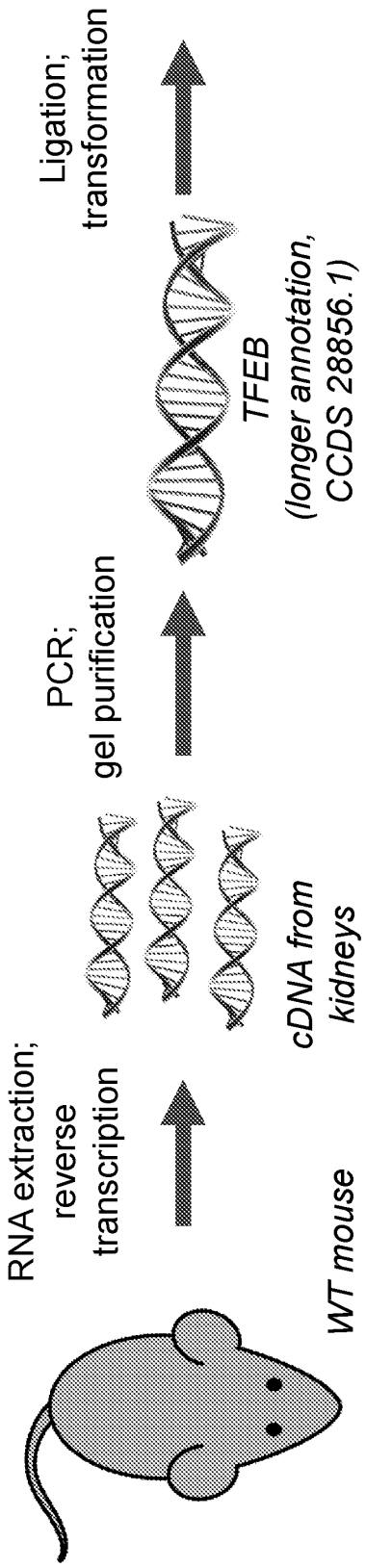

WT mouse
RNA extraction;
reverse
transcription
cDNA from
kidneys
PCR;
gel purification
TFEB
(longer annotation,
CCDS 28856.1)
Ligation;
transformation

Figure 5 (Continued)

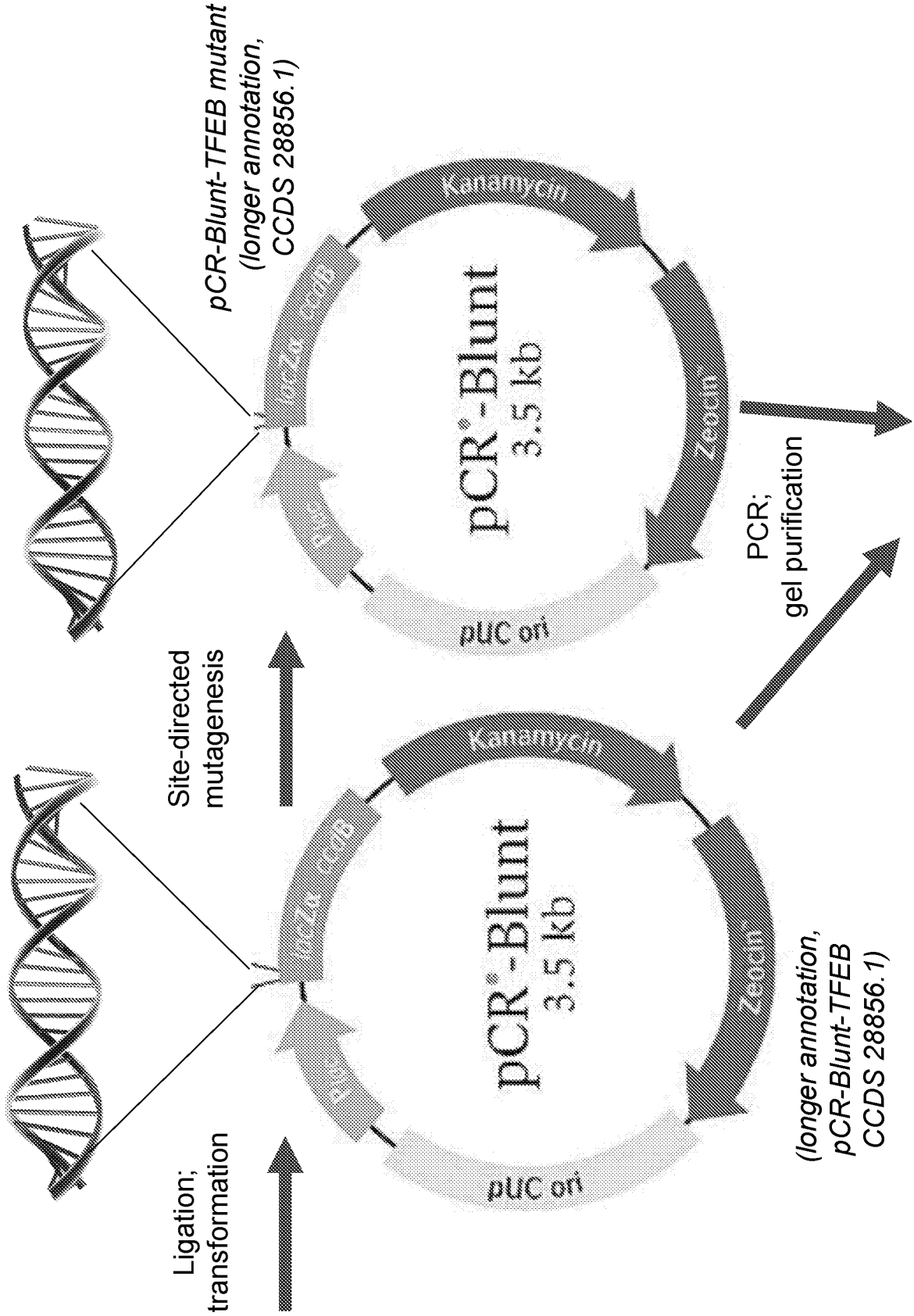


Figure 5 (Continued)

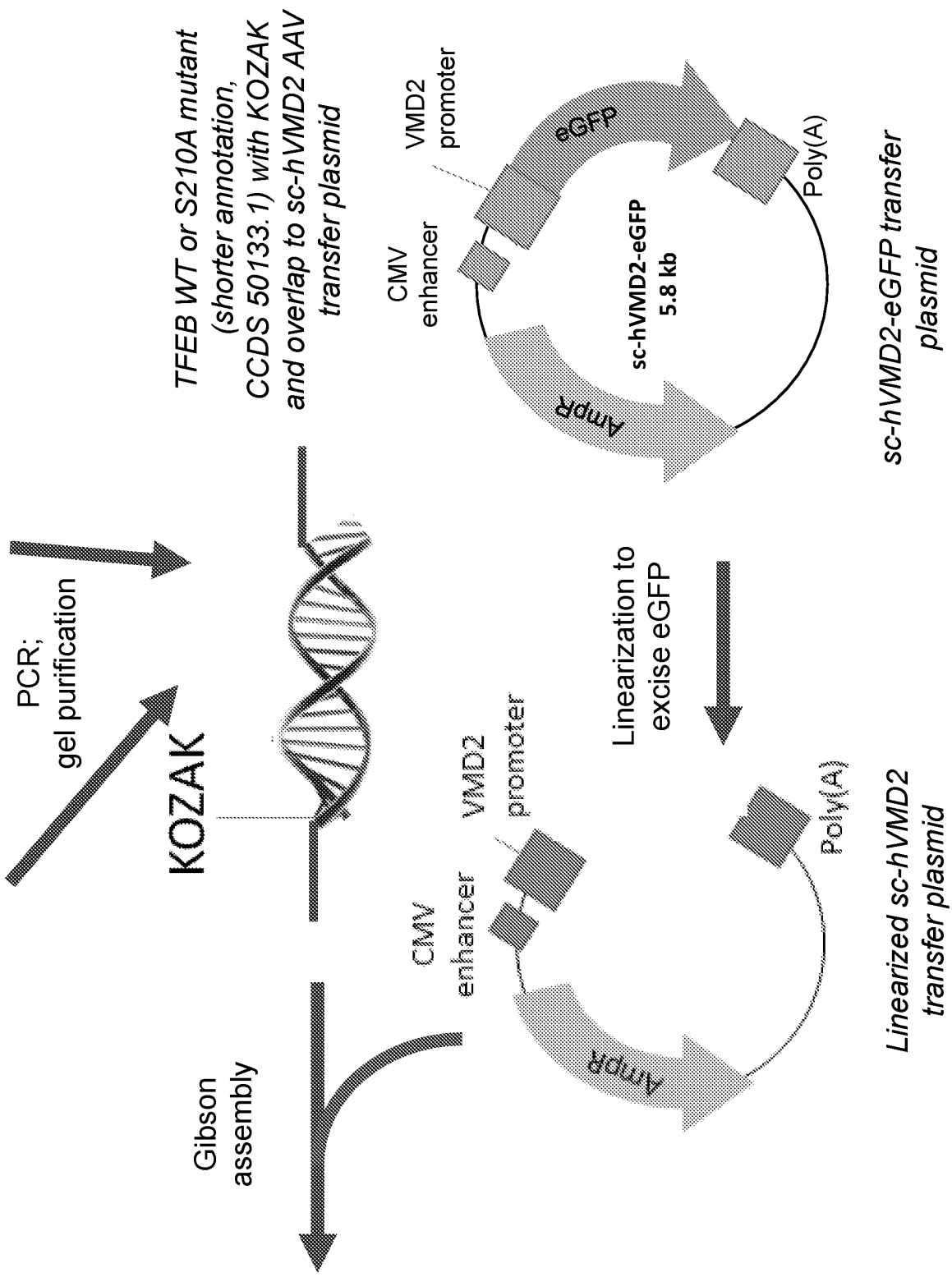


Figure 5 (Continued)

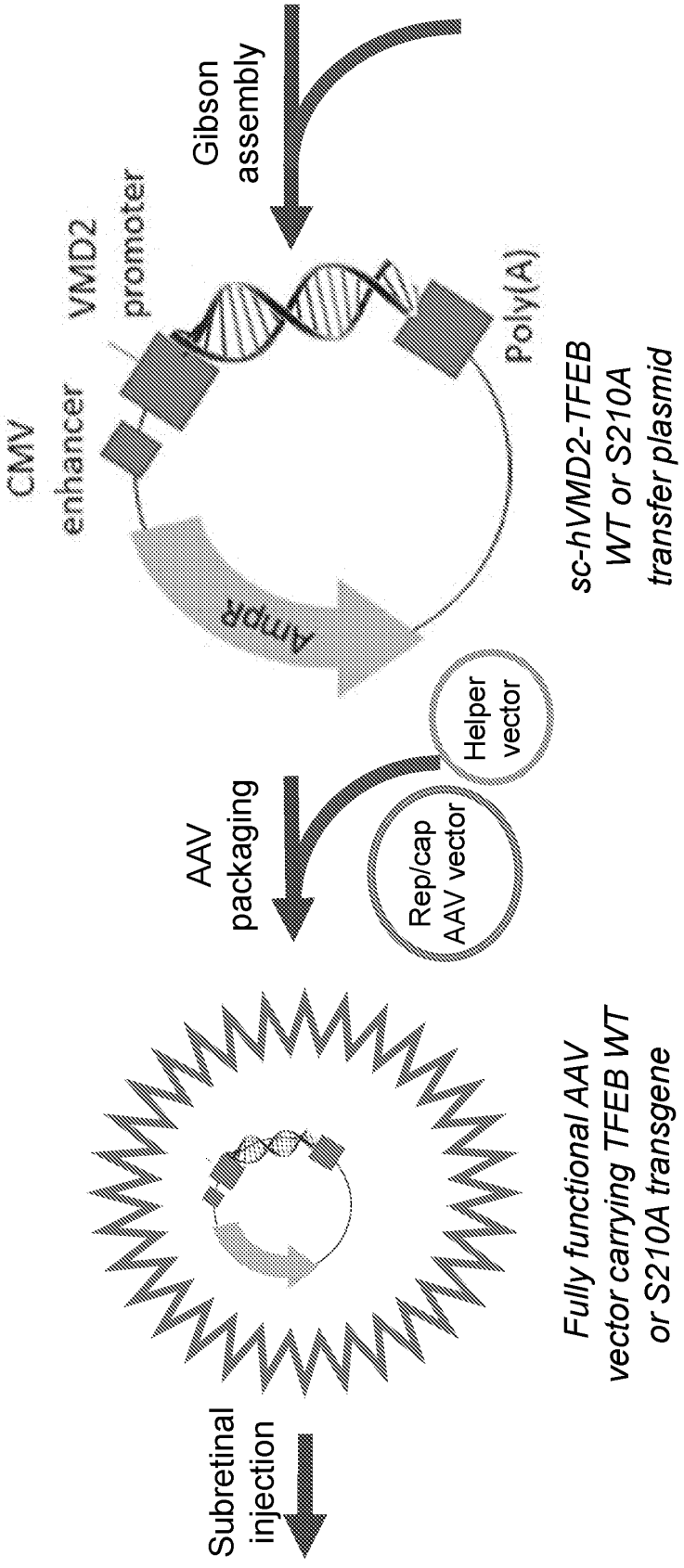


Figure 5 (Continued)

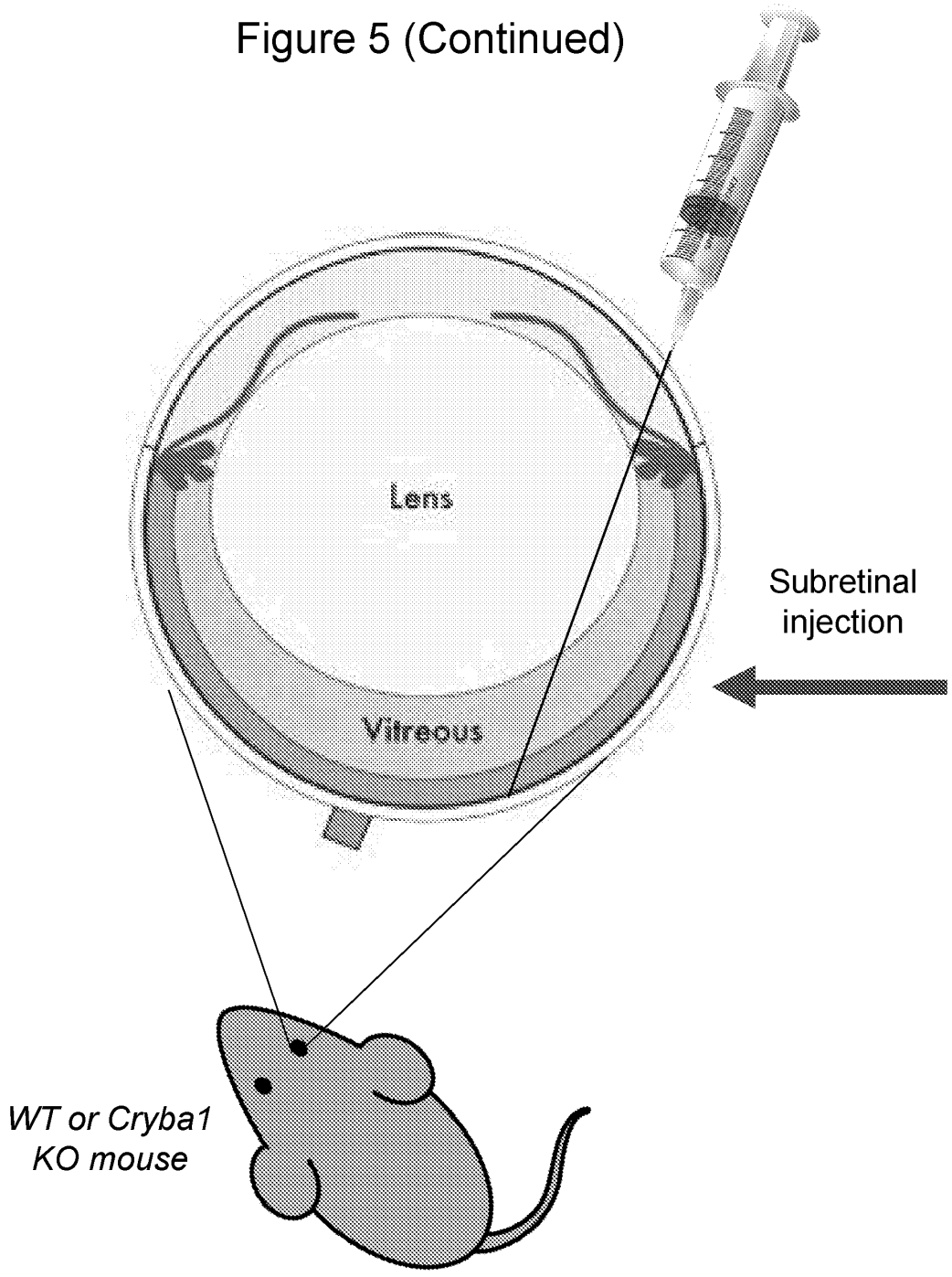


Figure 6

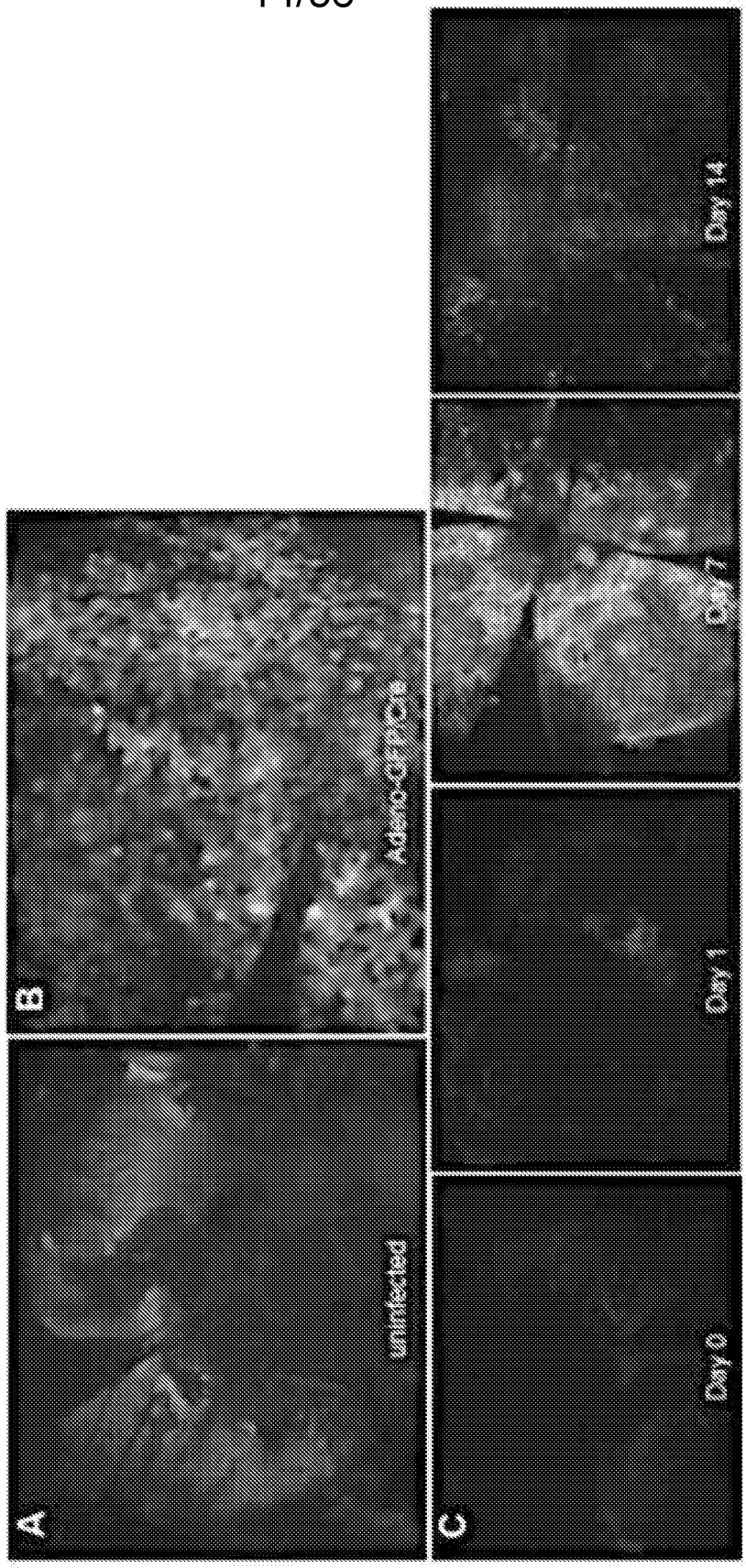


Figure 7A

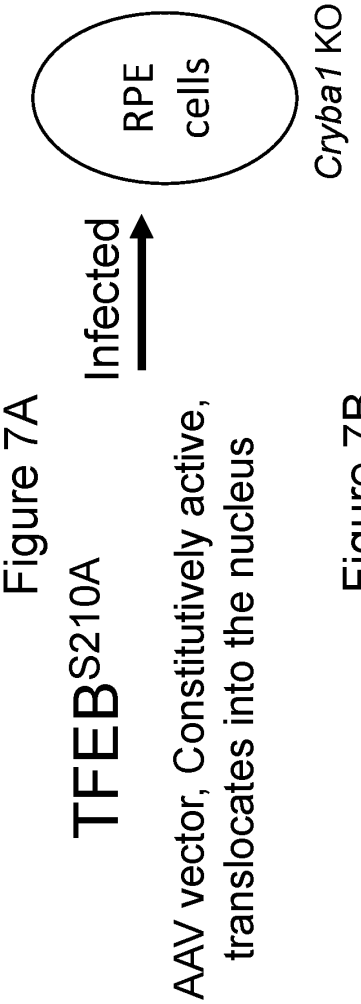


Figure 7B

B

Figure 7C

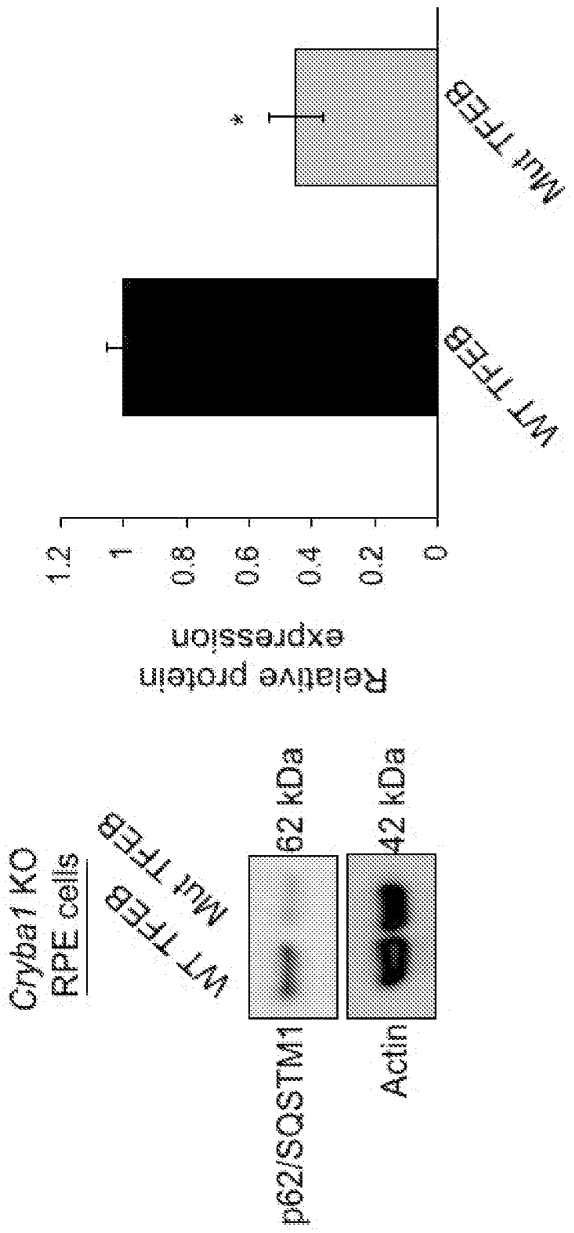

Cryba1 KO
RPE cells
WT TFEB
Mut TFEB
62 kDa
42 kDa
p62/SQSTM1
Actin
Relative protein expression
1.2
1
0.8
0.6
0.4
0.2
0
*
WT TFEB
Mut TFEB

Figure 8A

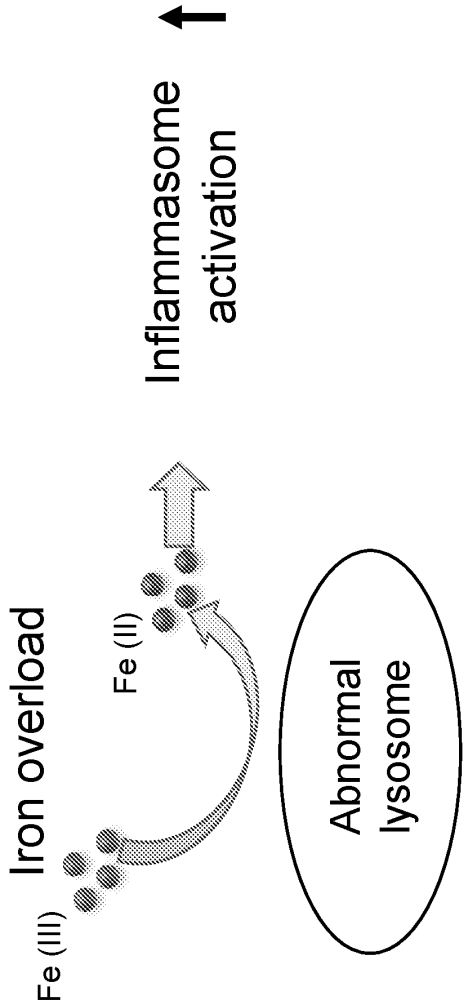

Inflammasome activation
Iron overload
Fe (III)
Fe (II)
Abnormal lysosome

Figure 8B

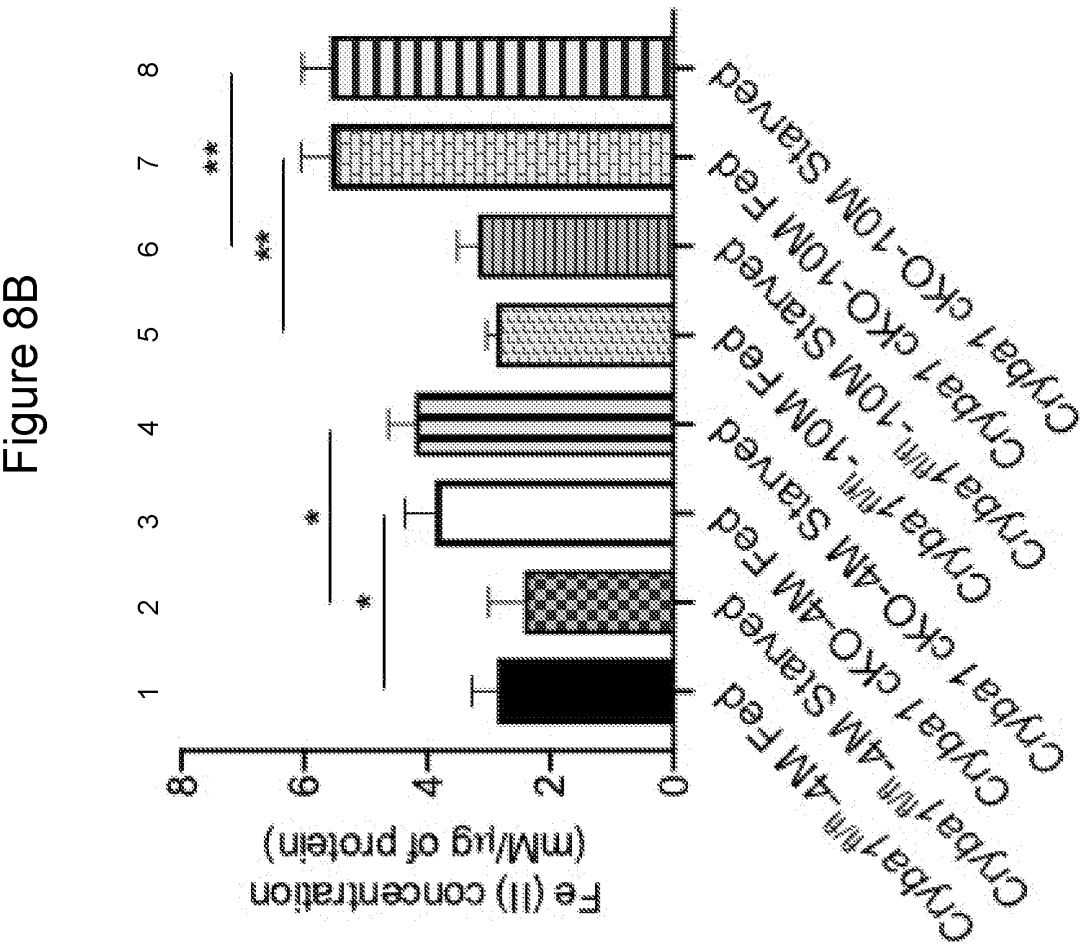

Fe (II) concentration
(mM/µg of protein)
0
2
4
6
8
1
2
3
4
5
6
7
8
*
*
*
**
**
Cryba7fl/fl_4M Fed
Cryba7fl/fl_4M Starved
Cryba7 cKO-4M Fed
Cryba7 cKO-4M Starved
Cryba7fl/fl_10M Fed
Cryba7fl/fl_10M Starved
Cryba7 cKO-10M Fed
Cryba7 cKO-10M Starved

Figure 8C

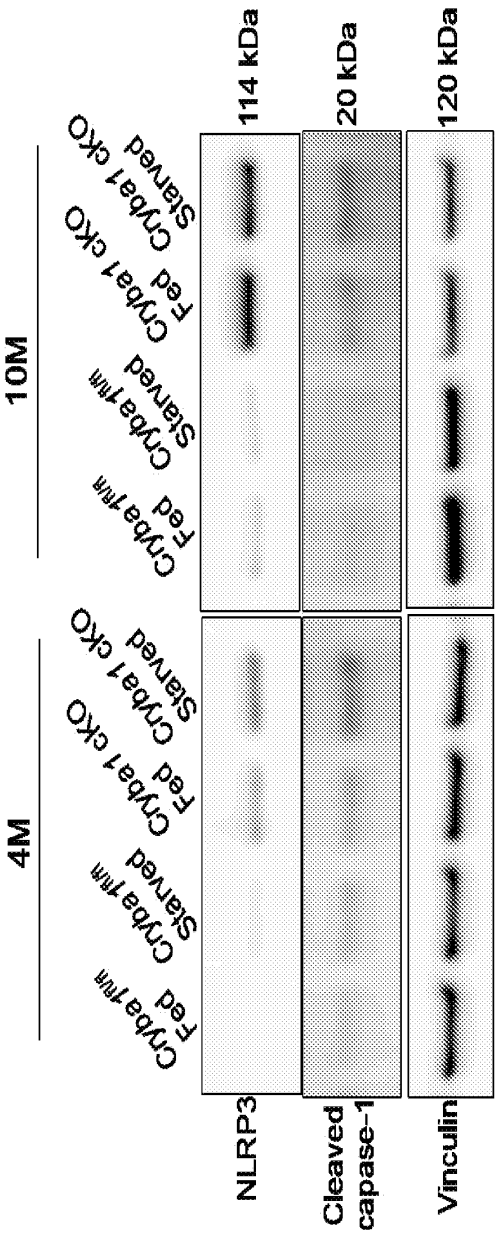

114 kDa
20 kDa
120 kDa
NLRP3
Cleaved capase-1
Vinculin
4M
10M
Cybb7fl/fl
Fed
Cybb7fl/fl
Starved
Cybb7 cKO
Fed
Cybb7 cKO
Starved

Figure 9A

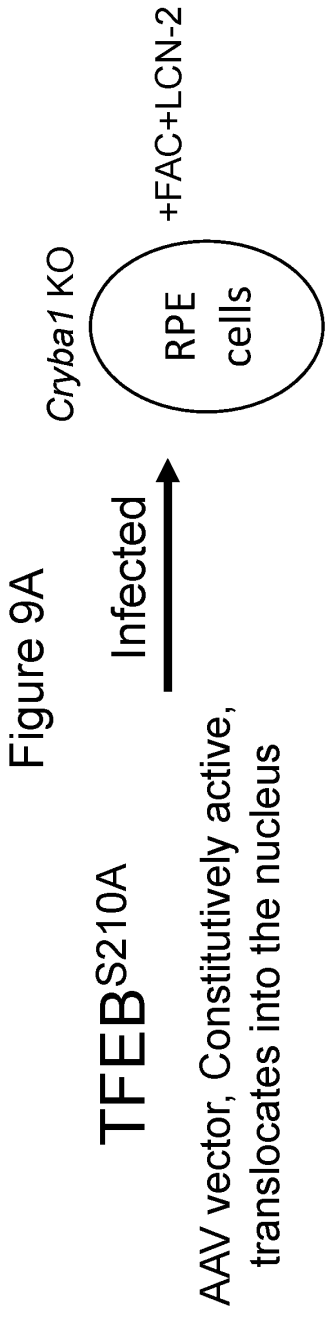


Figure 9B

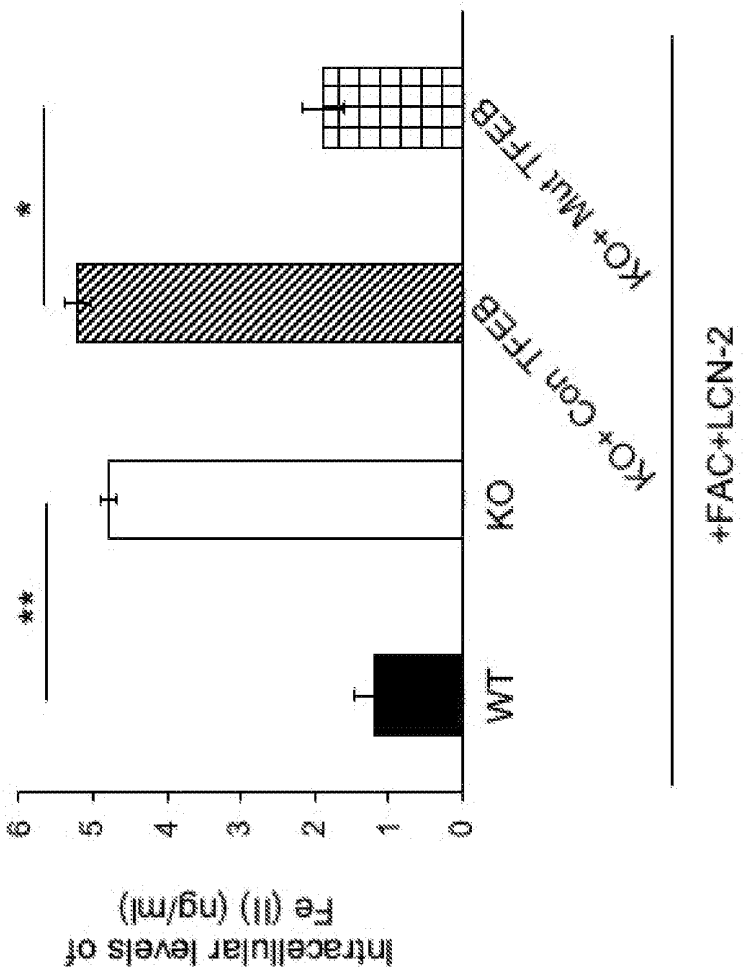


Figure 9C

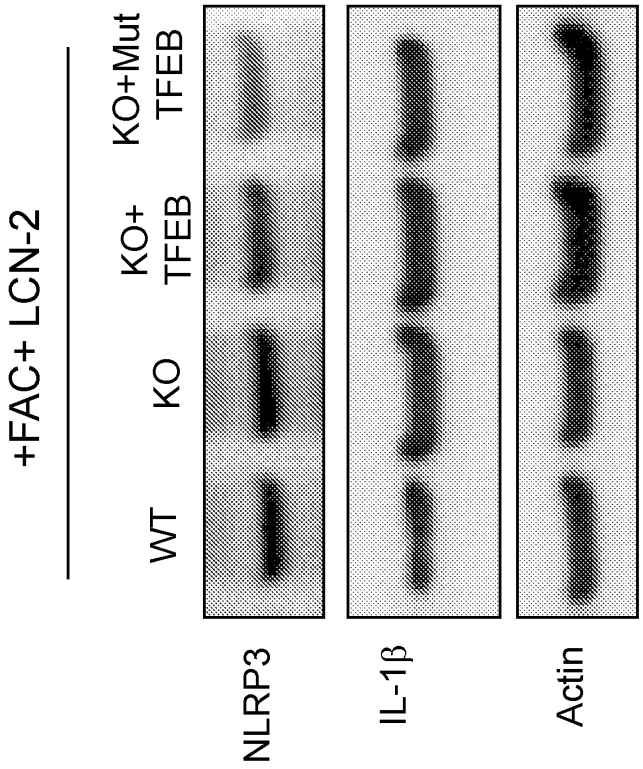


Figure 10A

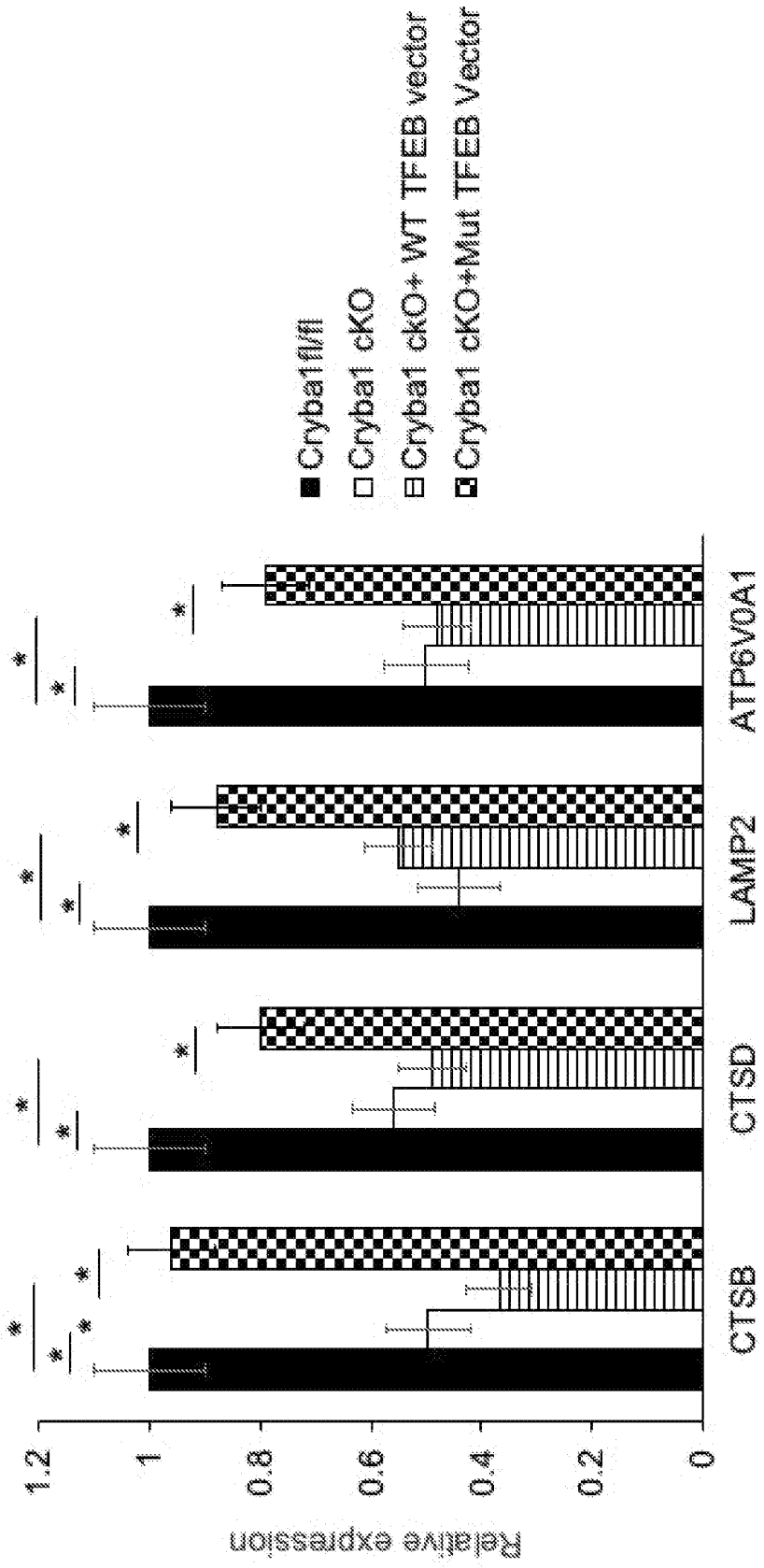

Cryba1 fl/fl
Cryba1 cKO
Cryba1 cKO+ WT TFEB vector
Cryba1 cKO+Mut TFEB Vector
Relative expression
0
0.2
0.4
0.6
0.8
1
1.2
CTSB
CTSD
LAMP2
ATP6V0A1
*

Figure 10B

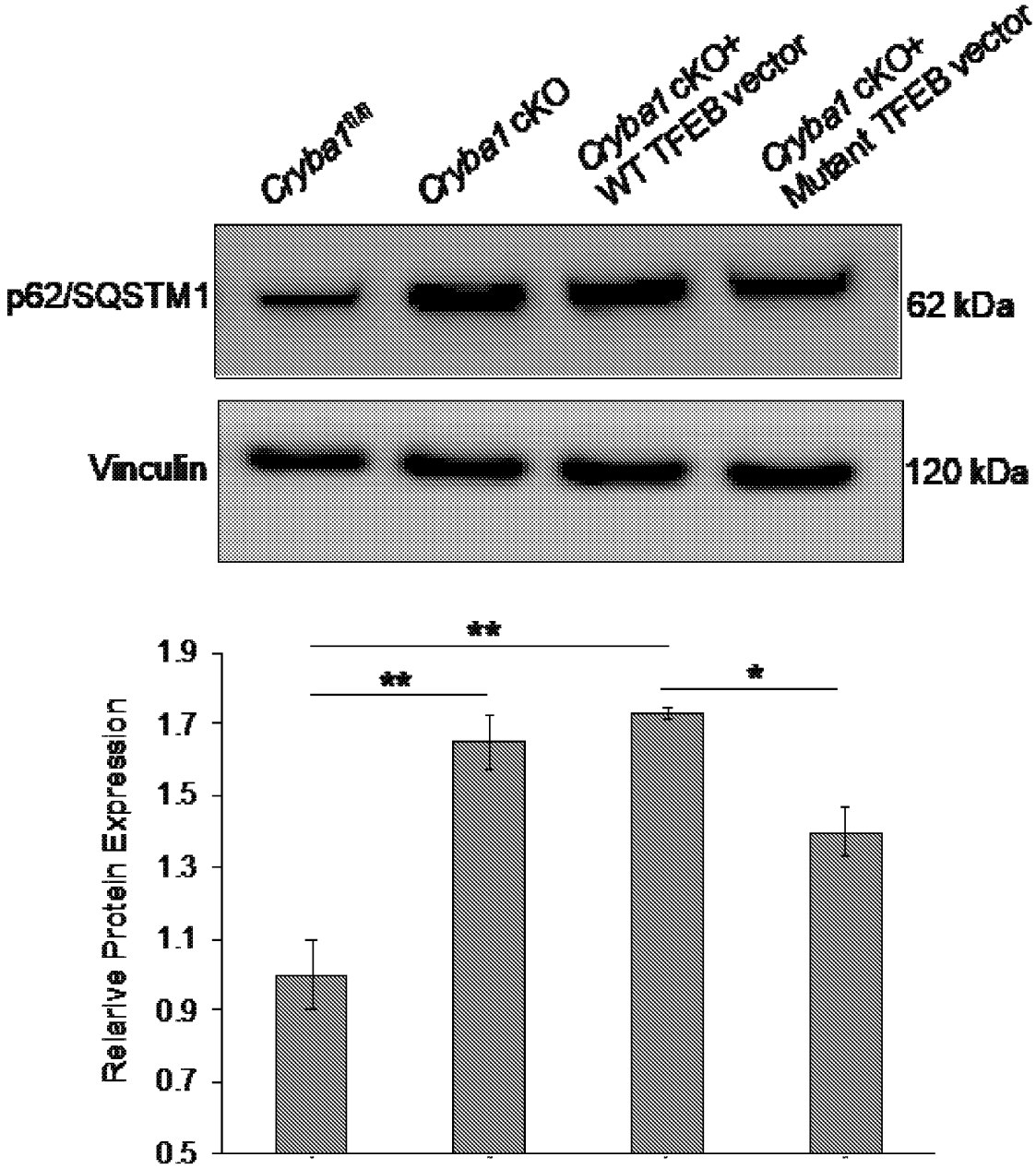

Cryba1fl/fl
Cryba1 cKO
Cryba1 cKO+ WT TFEB vector
Cryba1 cKO+ Mutant TFEB vector
p62/SQSTM1
62 kDa
Vinculin
120 kDa
Relative Protein Expression
1.9
1.7
1.5
1.3
1.1
0.9
0.7
0.5
**
**
*

Figure 11A

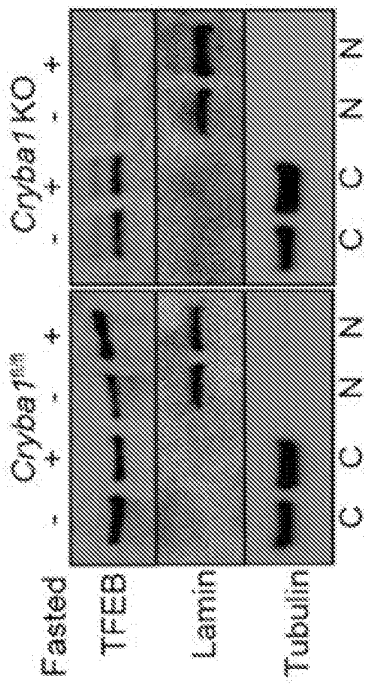


Figure 11B

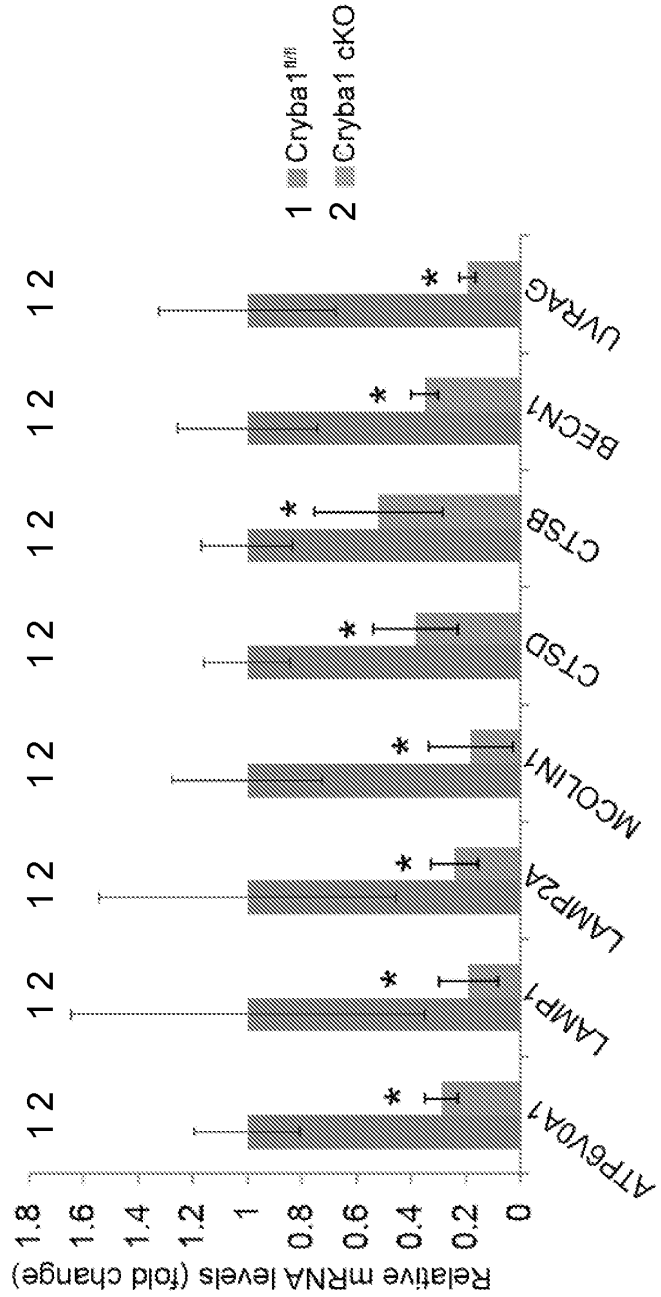


Figure 12B

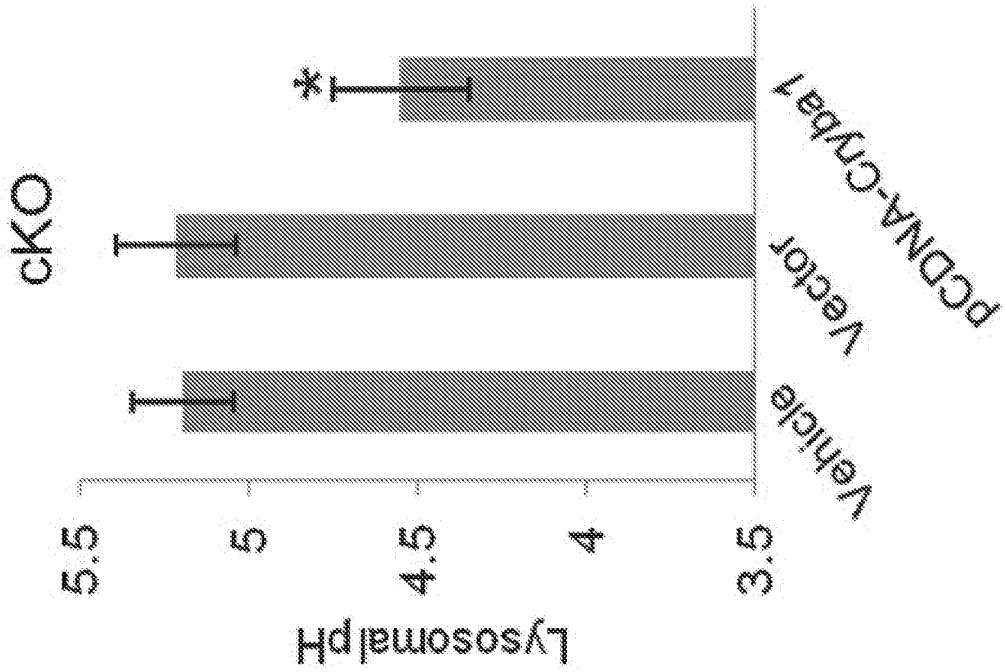


Figure 12A

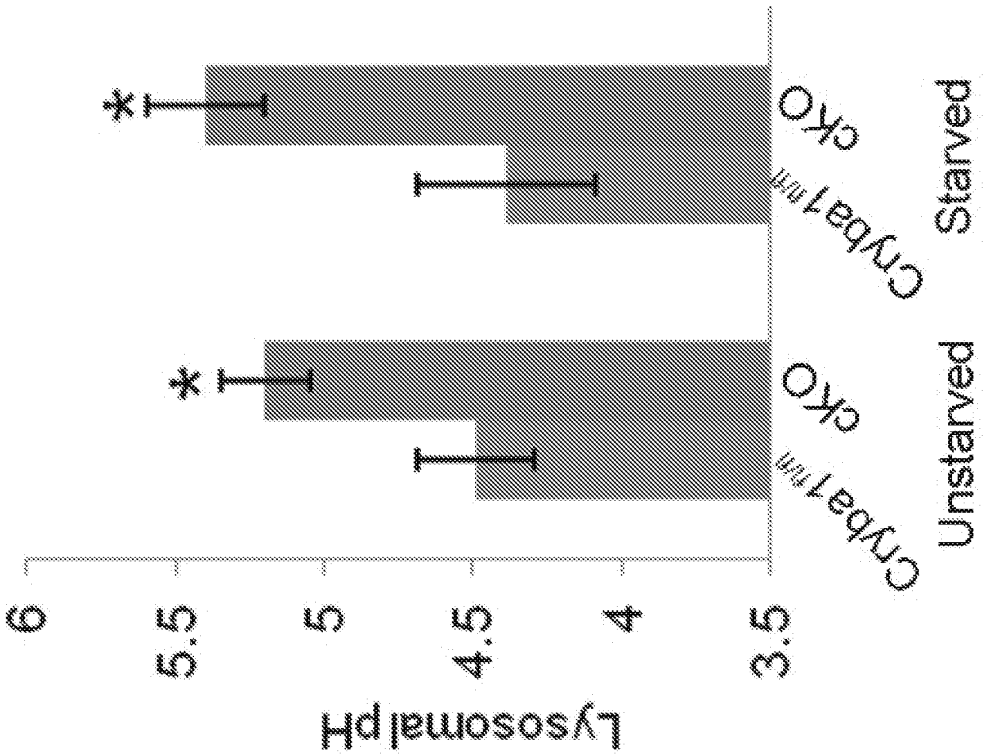


Figure 13B

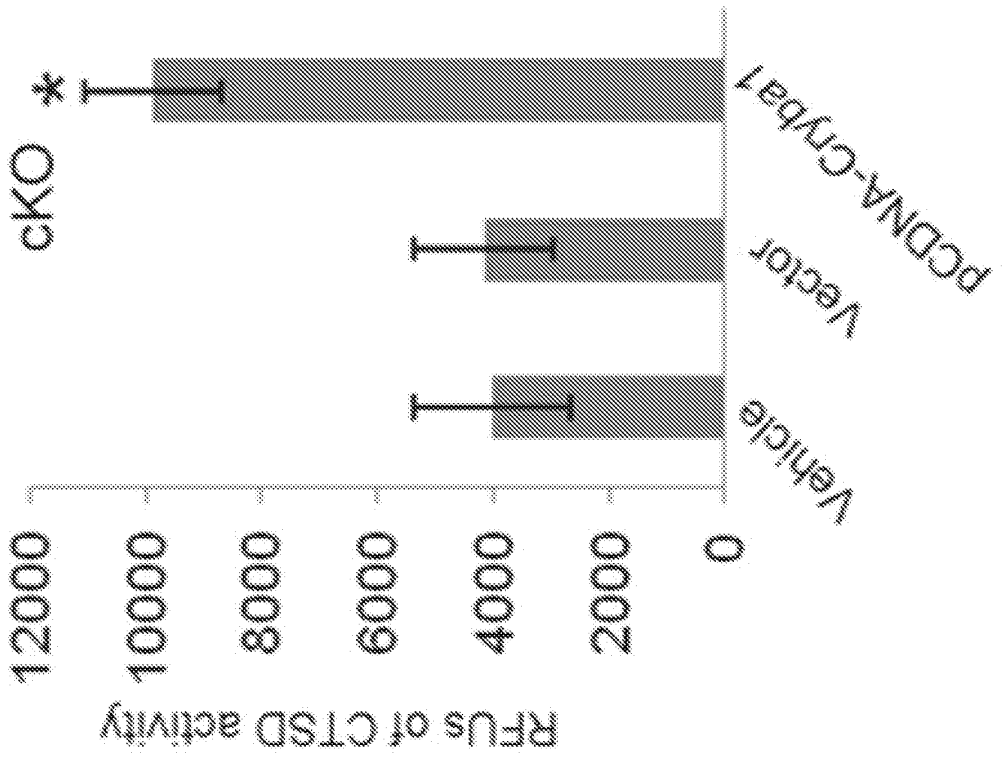


Figure 13A

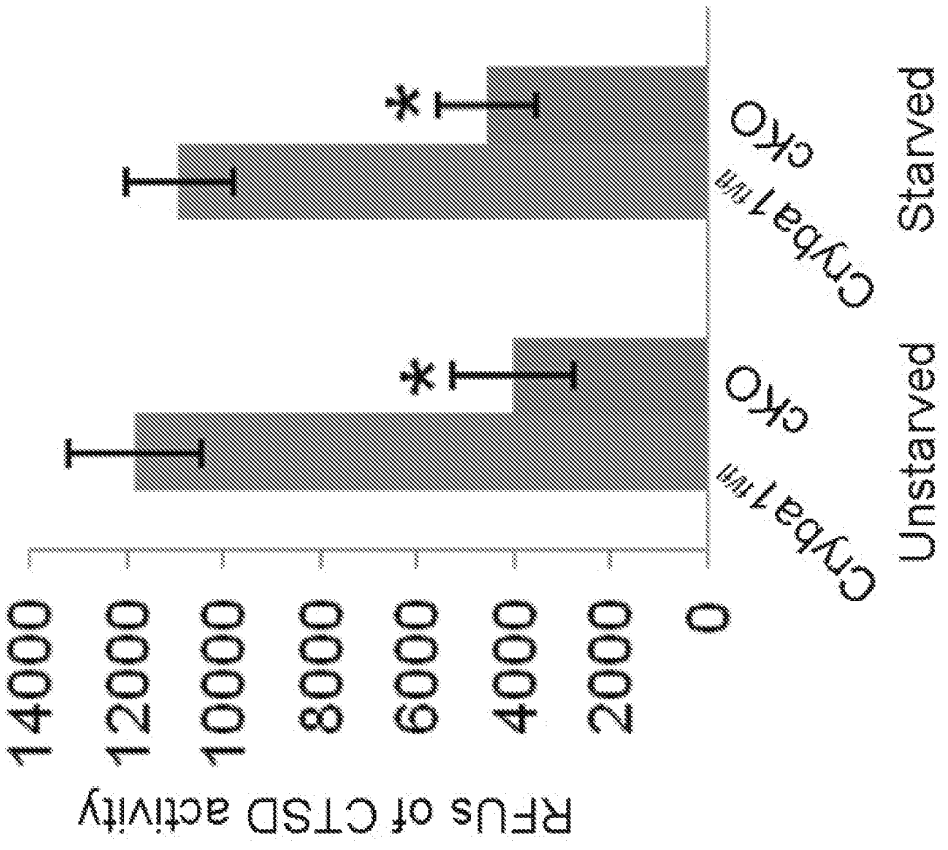


Figure 14A

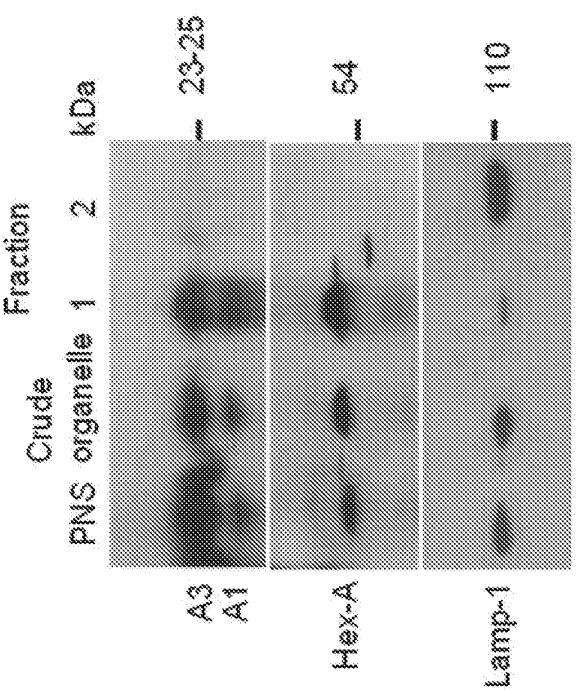
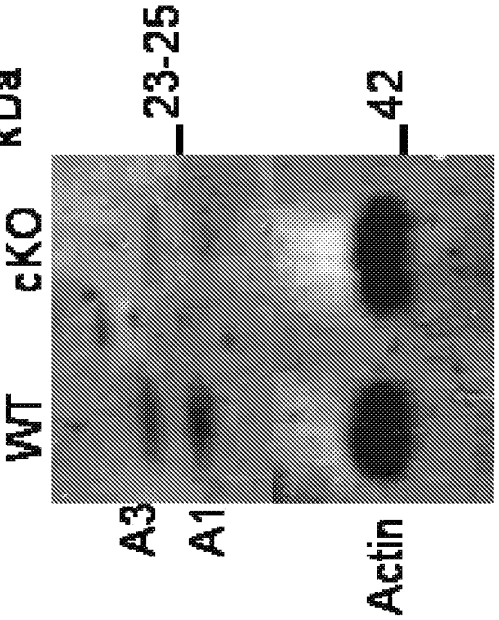


Figure 14B



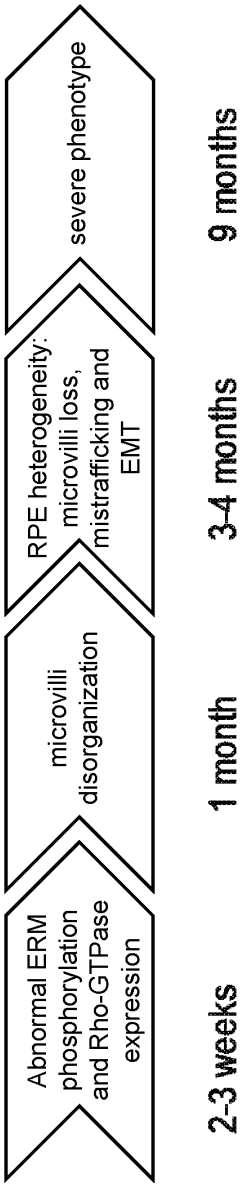


Figure 14C

Figure 15A

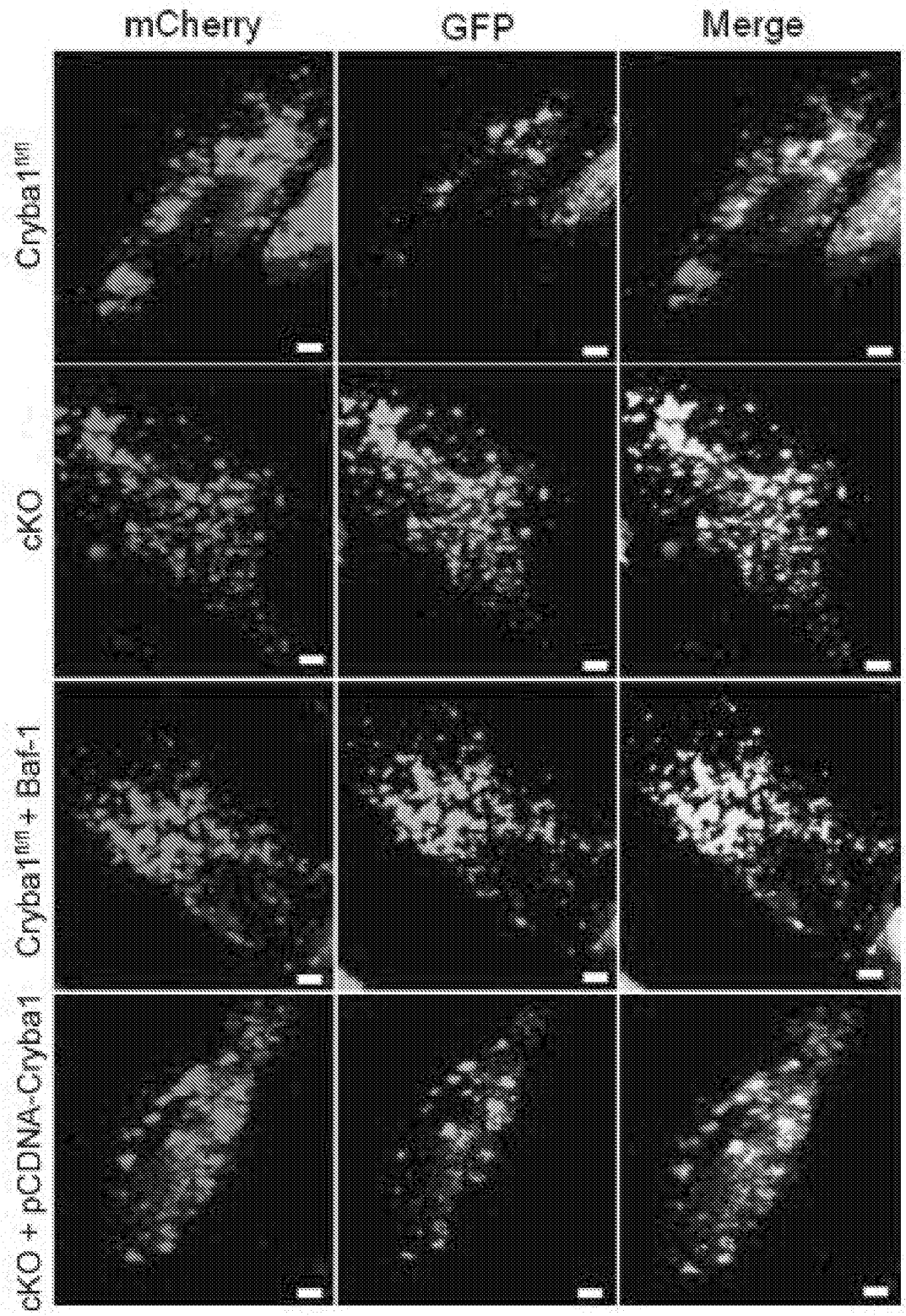

mCherry
GFP
Merge
Cryba1fl/fl
cKO
Cryba1fl/fl + Baf-1
cKO + pCDNA-Cryba1

Figure 15B

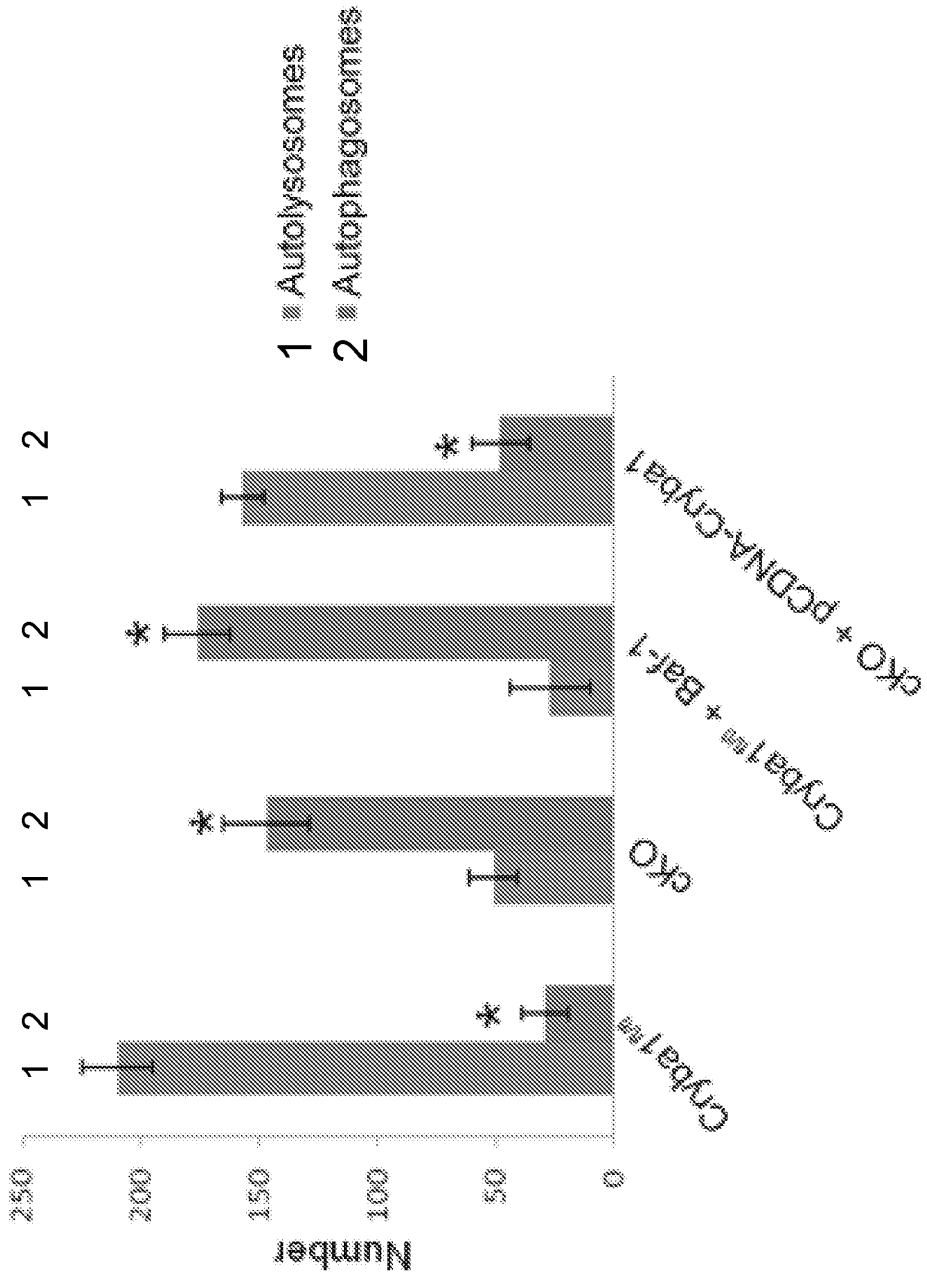

1 Autolysosomes
2 Autophagosomes
Number
250
200
150
100
50
0
Cybaflox
cKO
Cybaflox + Baf-1
cKO + pCDNA-Cybaf
1 2
*

Figure 16A

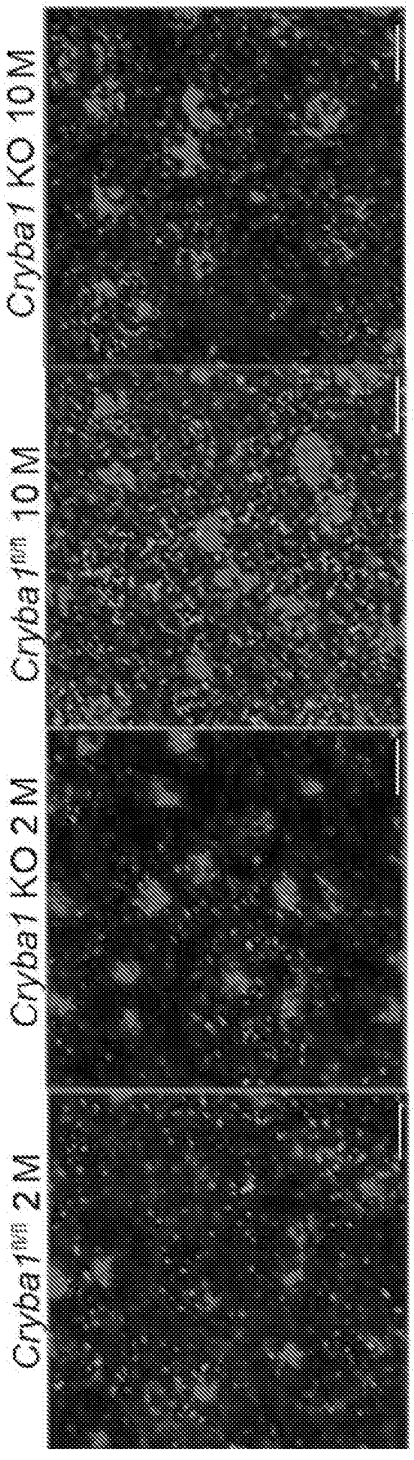

Cryba1 KO 10 M
Cryba1iKO 10 M
Cryba1 KO 2 M
Cryba1iKO 2 M
CathepsinD/DAPI

Figure 16B

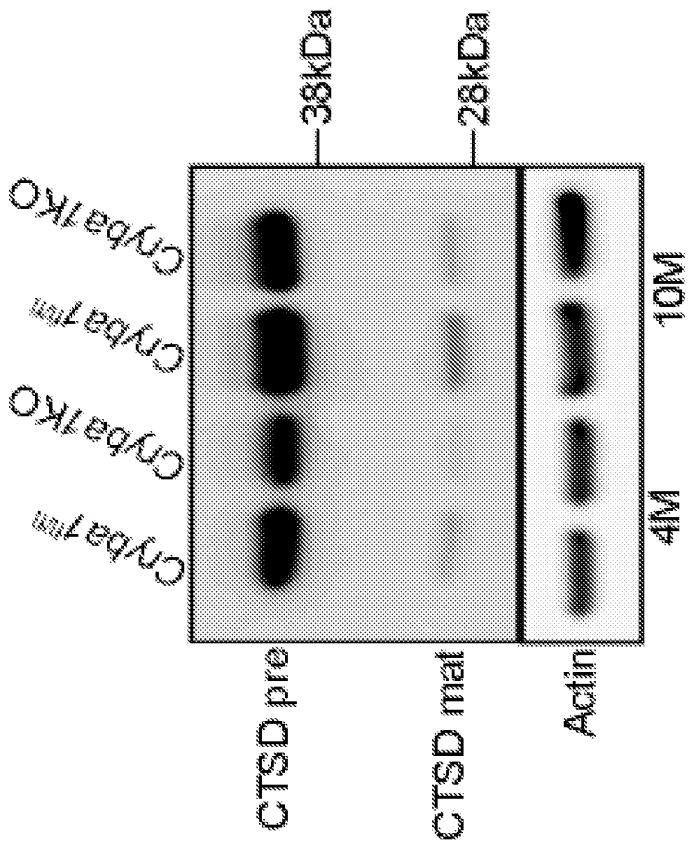

38kDa
28kDa
Cryba1KO
Cryba1fl/fl
Cryba1KO
Cryba1fl/fl
10M
4M
CTSD pre
CTSD mat
Actin

Figure 16B (Continued)

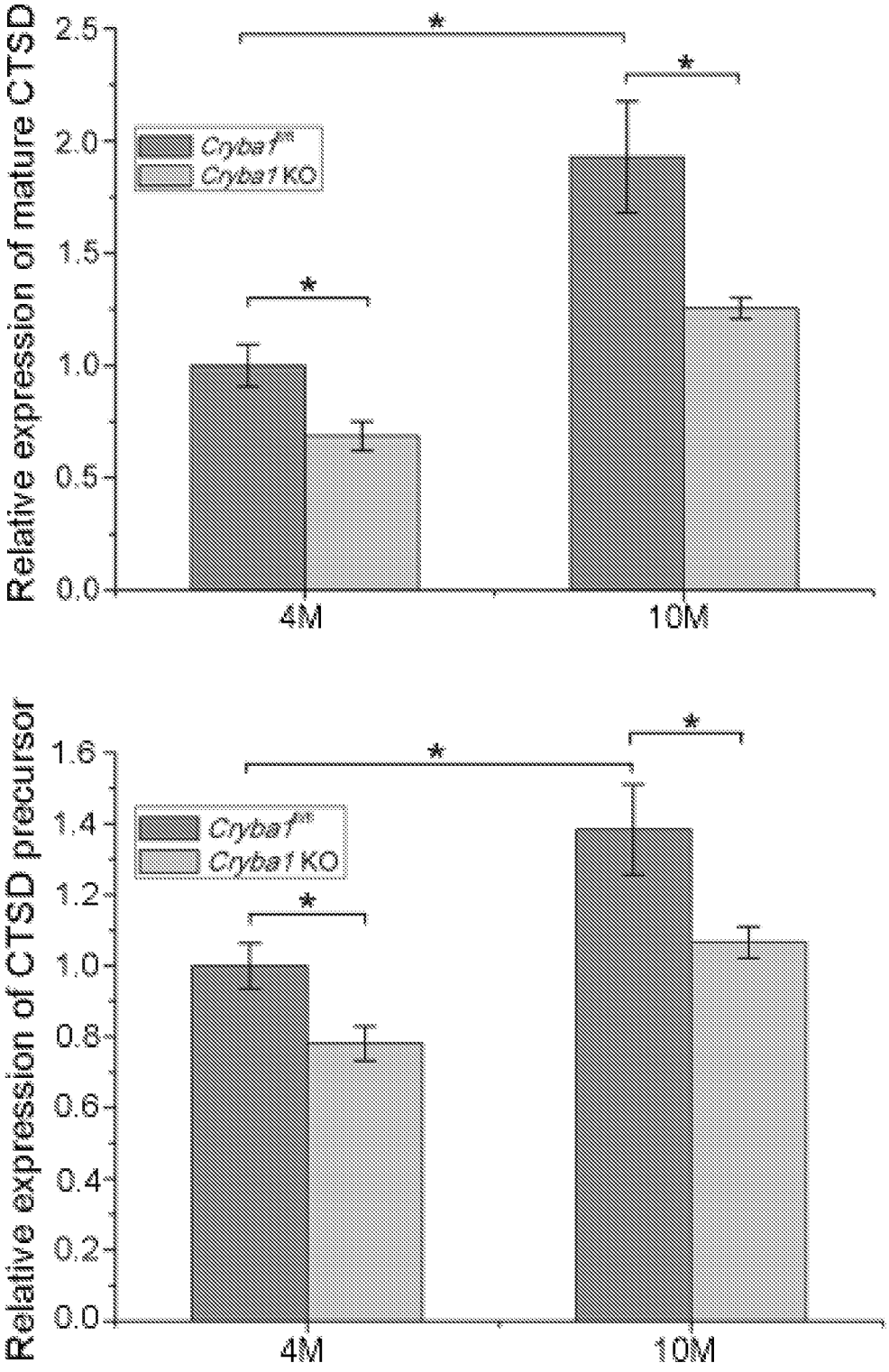
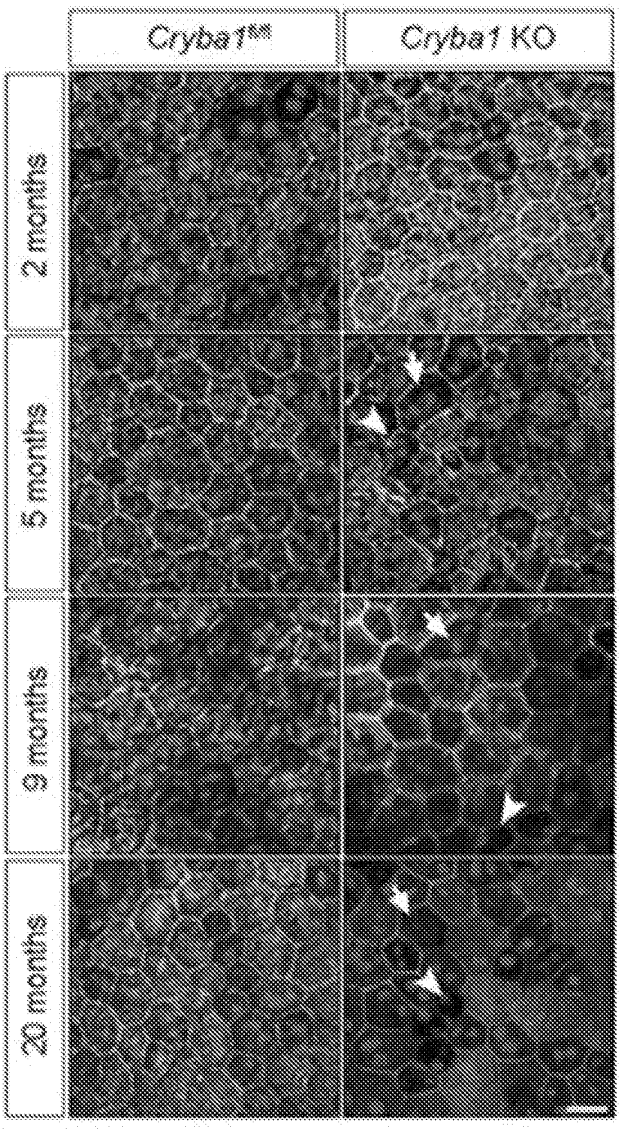


Figure 17A



Phalloidin/RPE65/DAPI

Figure 17B

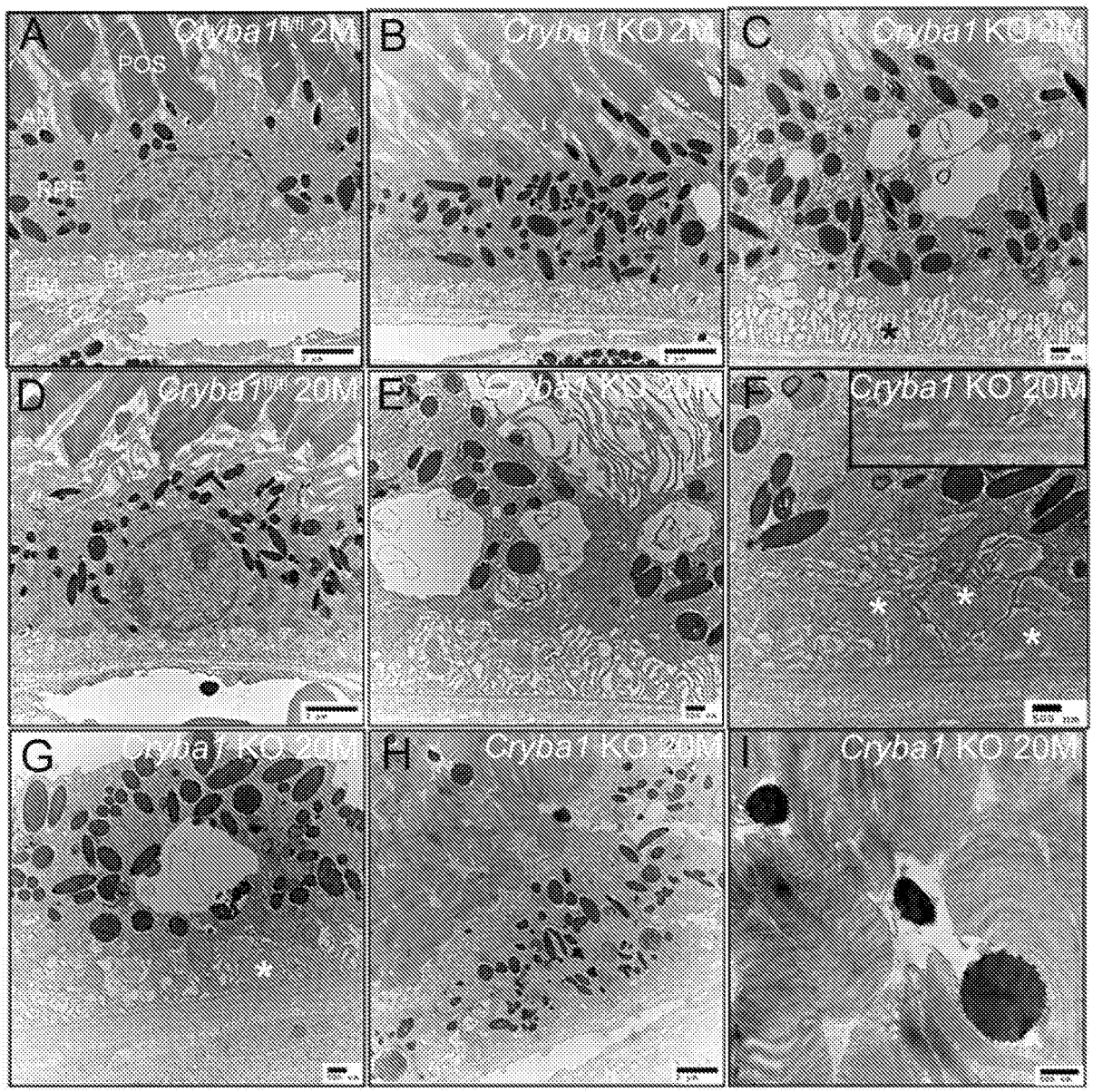

A
Cryba1fl/fl 2M
POS
ONL
Rec
IPM
B
Cryba1 KO 2M
C
Cryba1 KO 2M
D
Cryba1fl/fl 20M
E
Cryba1 KO 20M
F
Cryba1 KO 20M
G
Cryba1 KO 20M
H
Cryba1 KO 20M
I
Cryba1 KO 20M

Figure 18B

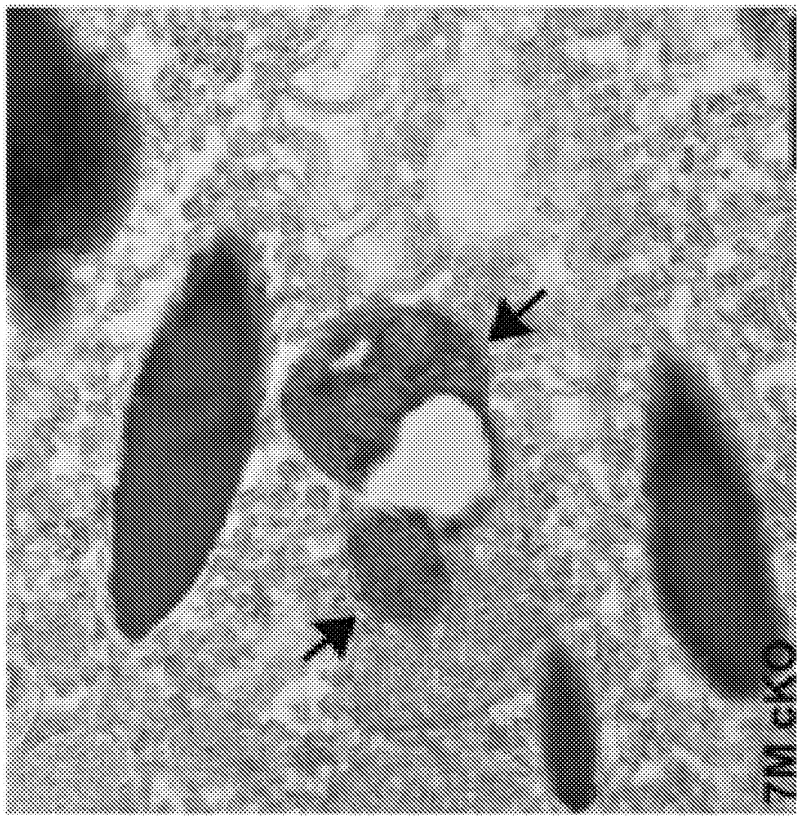


Figure 18A

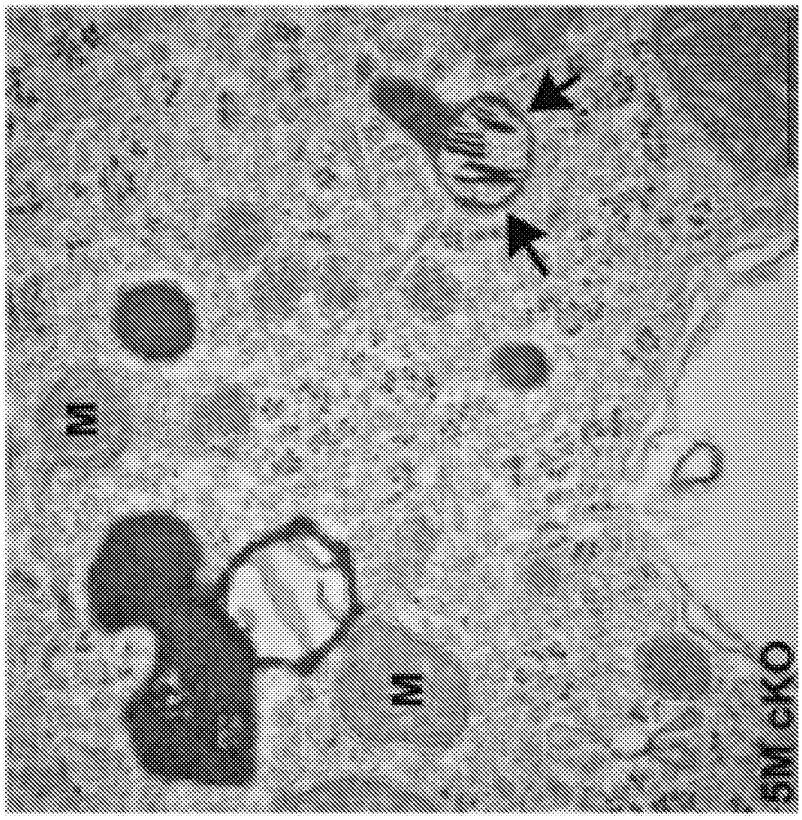


Figure 18C

