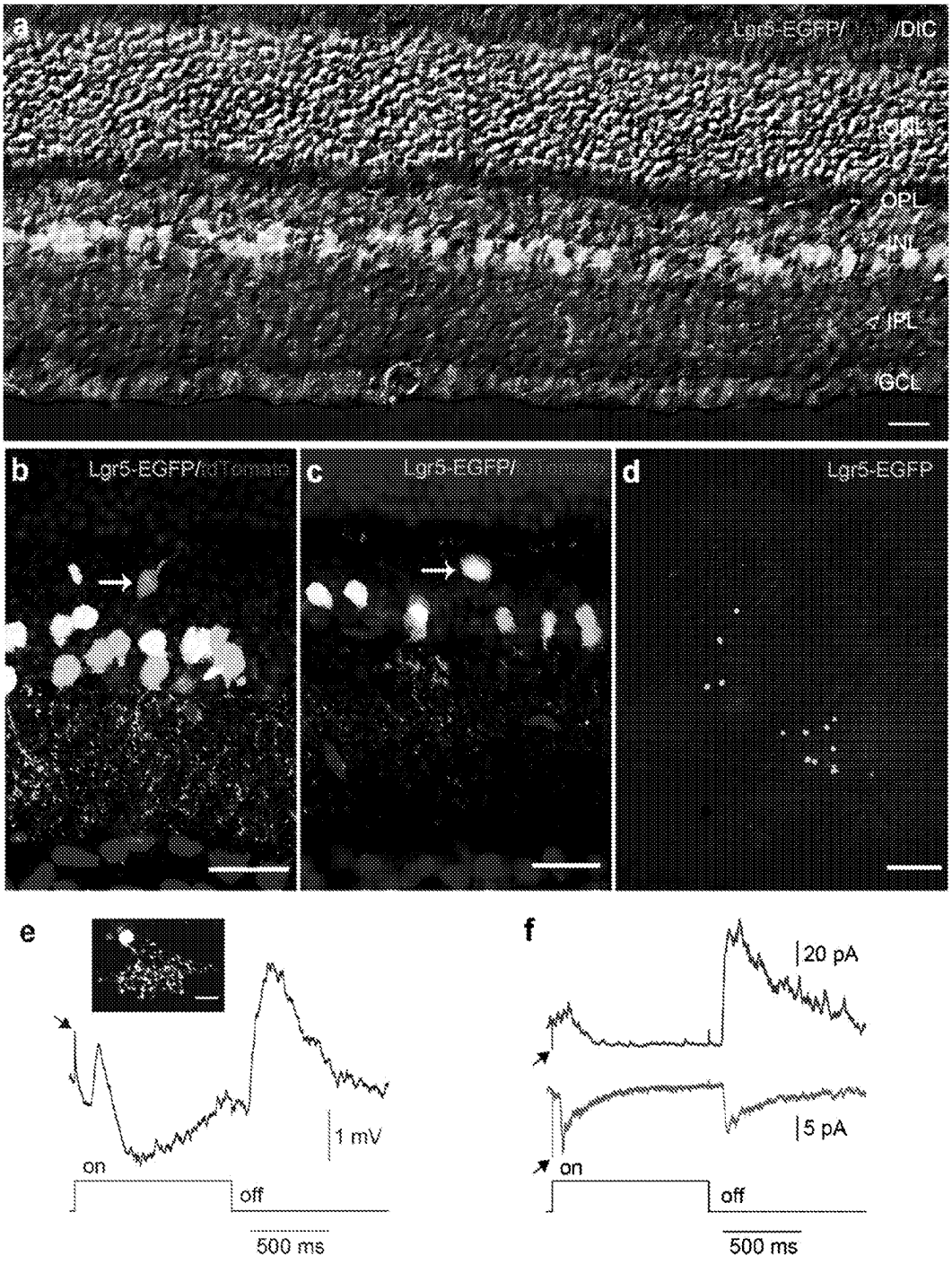

a
Lgr5-EGFP/
/DIC
ONL
OPL
INL
IPL
GCL
b
Lgr5-EGFP/tdTomato
c
Lgr5-EGFP/
d
Lgr5-EGFP
e
1 mV
on
off
500 ms
f
20 pA
5 pA
on
off
500 ms

FIG. 1

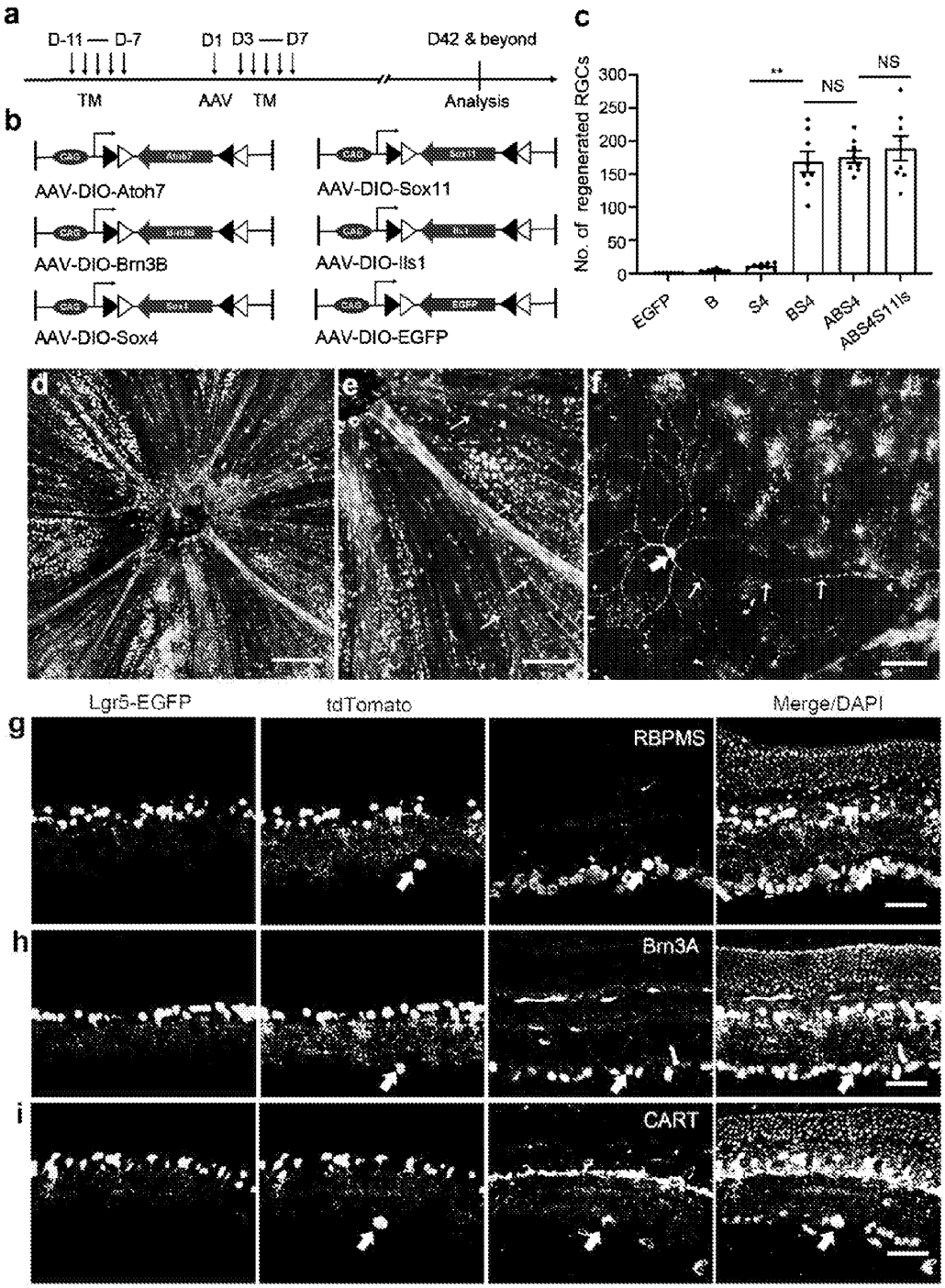

a
D-11 — D-7
D1 D3 — D7
D42 & beyond
TM
AAV TM
Analysis
b
AAV-DIO-Atoh7
AAV-DIO-Sox11
AAV-DIO-Brn3B
AAV-DIO-Is1
AAV-DIO-Sox4
AAV-DIO-EGFP
c
No. of regenerated RGCs
300
250
200
150
100
50
0
**
NS
NS
EGFP
B
S4
BS4
ABS4
ABS4S11Is
d
e
f
Lgr5-EGFP
tdTomato
Merge/DAPI
g
RBPMS
h
Brn3A
i
CART

FIG. 2

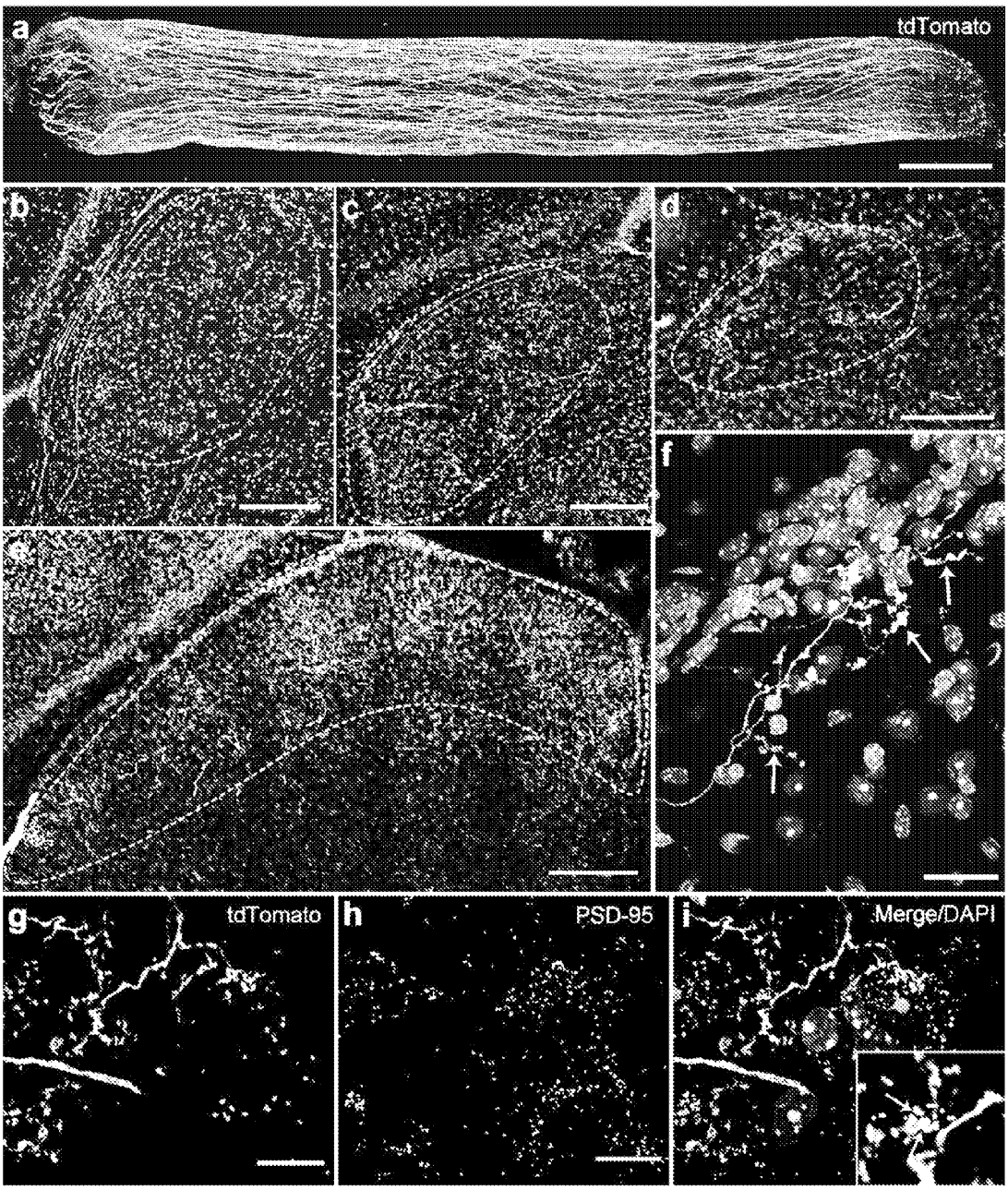


FIG. 3

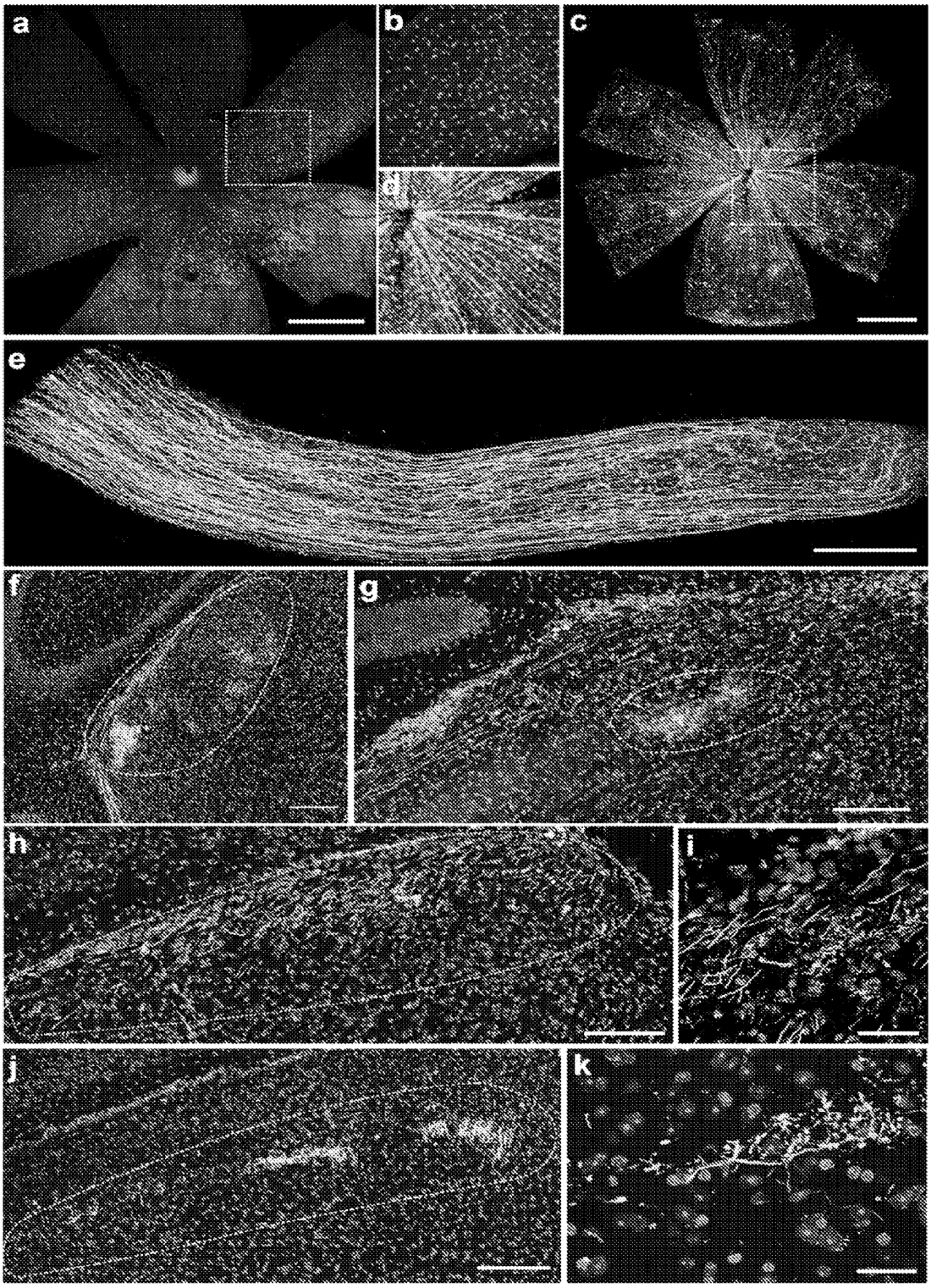


FIG. 4

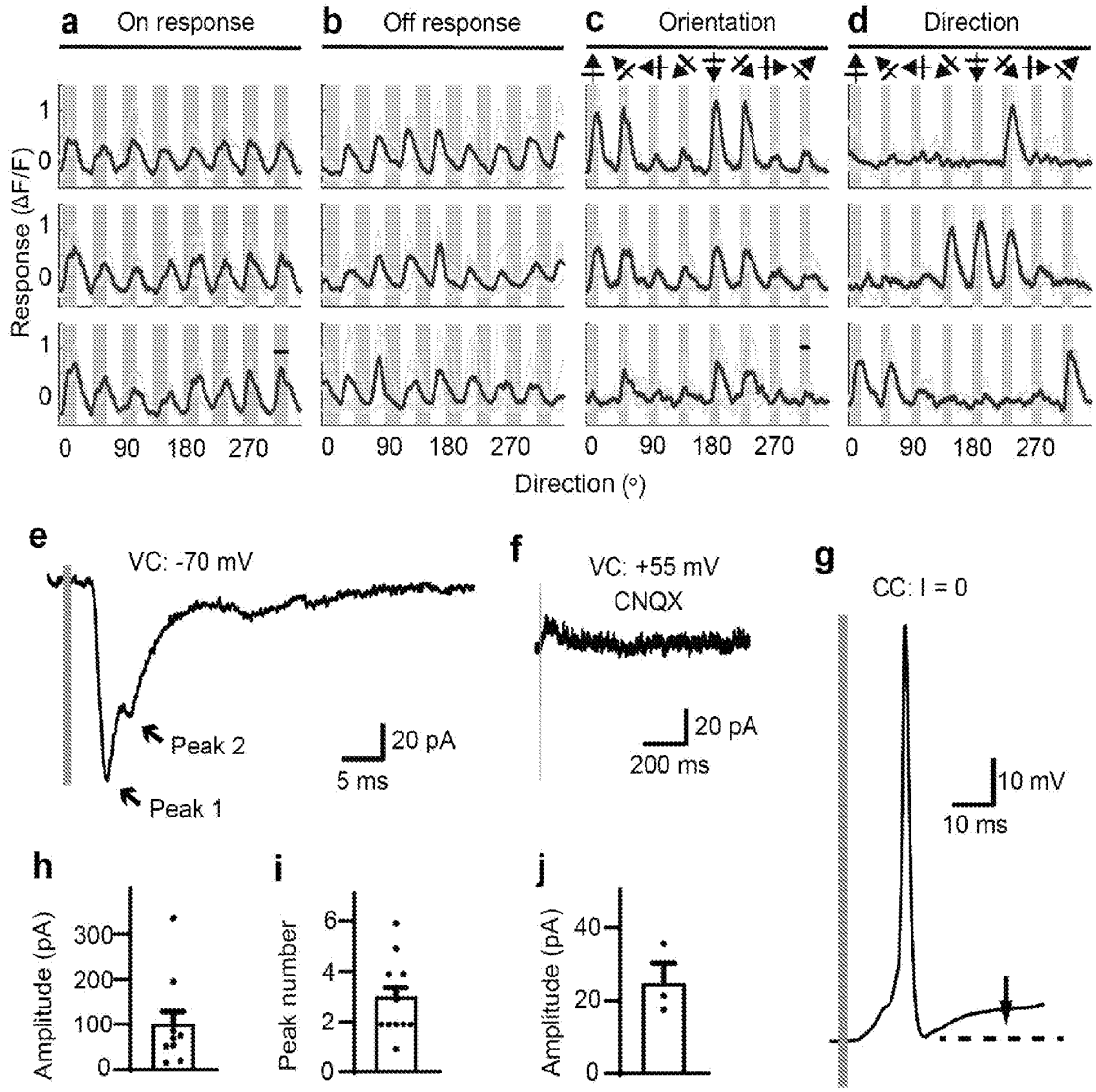

a On response
b Off response
c Orientation
d Direction
Response (ΔF/F)
1
0
0 90 180 270
Direction (°)
e
VC: -70 mV
Peak 2
Peak 1
20 pA
5 ms
f
VC: +55 mV
CNQX
20 pA
200 ms
g
CC: I = 0
10 mV
10 ms
h
Amplitude (pA)
300
200
100
0
i
Peak number
6
4
2
0
j
Amplitude (pA)
40
20
0

FIG. 5

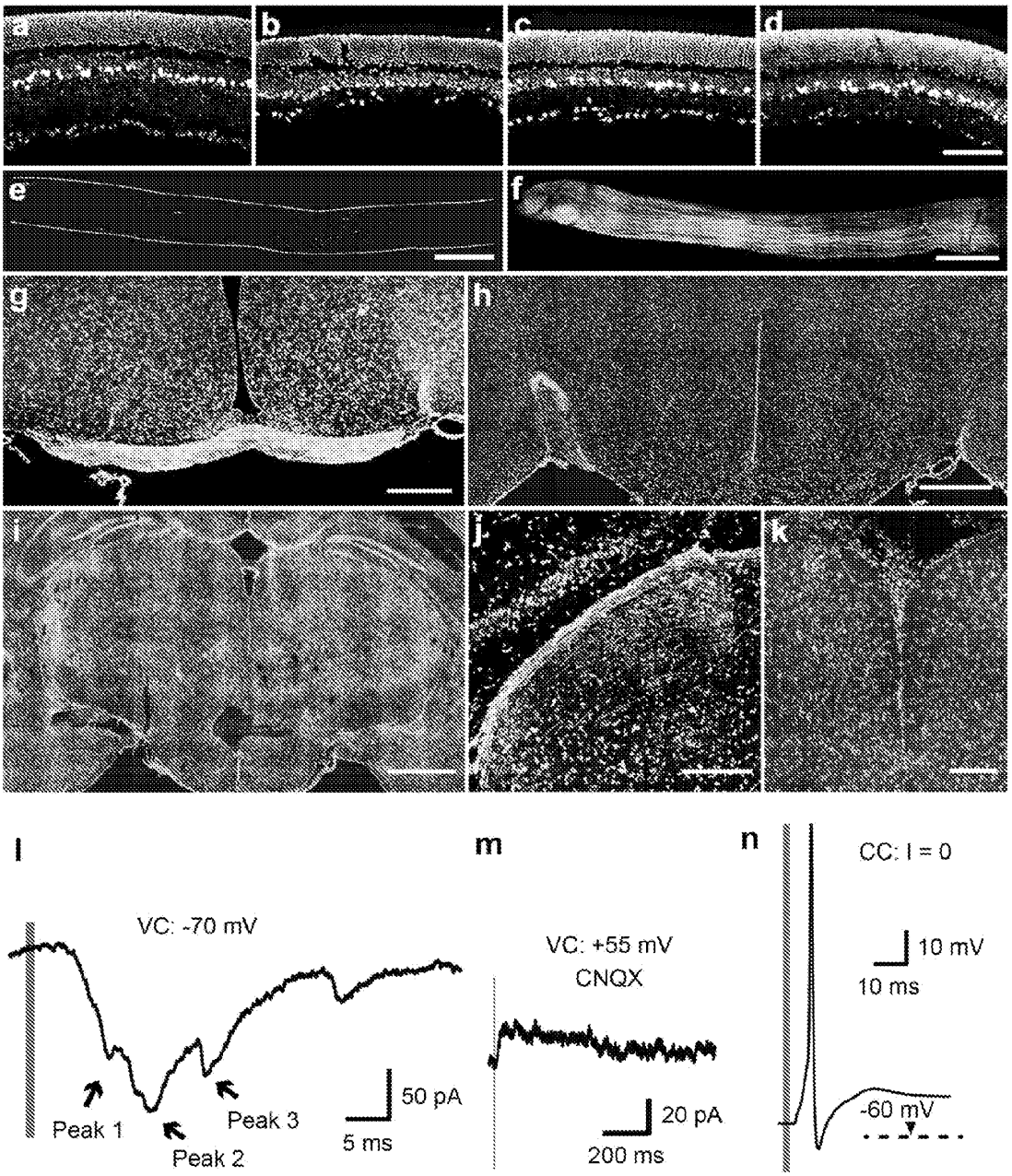

a
b
c
d
e
f
g
h
i
j
k
l
VC: -70 mV
Peak 1
Peak 2
Peak 3
50 pA
5 ms
m
VC: +55 mV
CNQX
20 pA
200 ms
n
CC: I = 0
10 mV
10 ms
-60 mV

FIG. 6

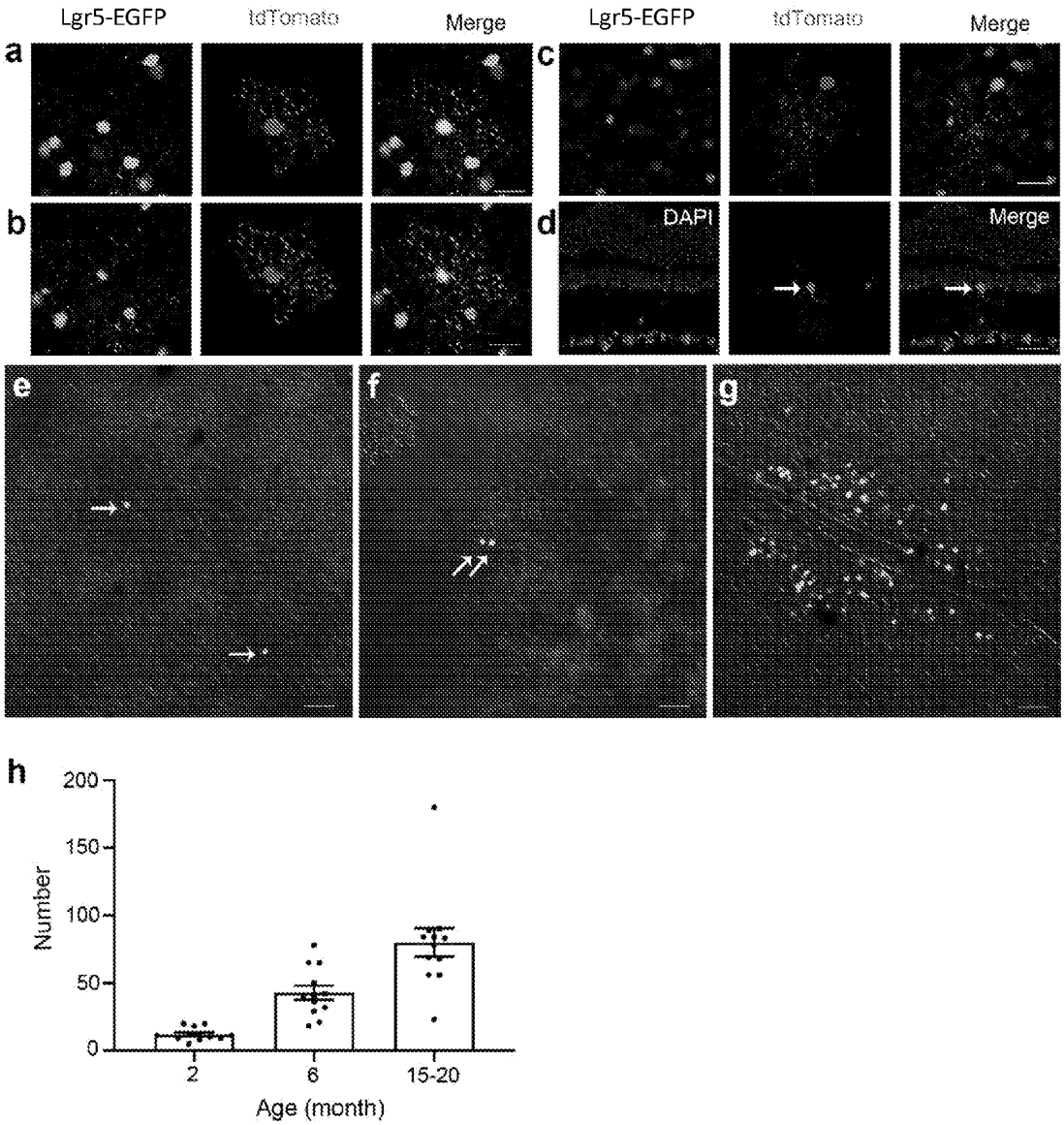

Lgr5-EGFP
tdTomato
Merge
Lgr5-EGFP
tdTomato
Merge
a
b
c
d
DAPI
Merge
e
f
g
h
Number
200
150
100
50
0
2
6
15-20
Age (month)

FIG. 7

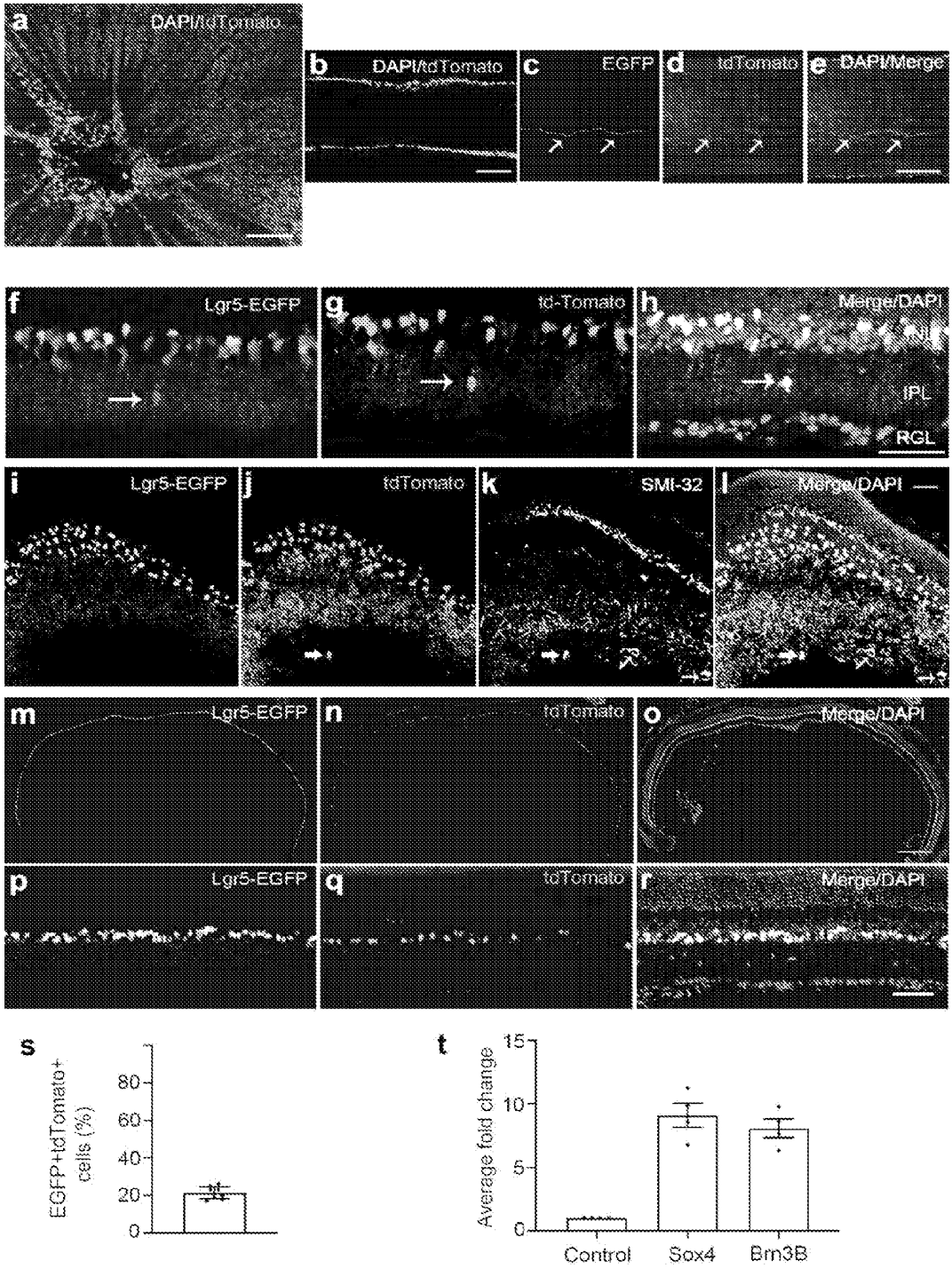

a
DAPI/tdTomato
b
DAPI/tdTomato
c
EGFP
d
tdTomato
e
DAPI/Merge
f
Lgr5-EGFP
g
td-Tomato
h
Merge/DAPI
INL
IPL
RGL
i
Lgr5-EGFP
j
tdTomato
k
SMI-32
l
Merge/DAPI
m
Lgr5-EGFP
n
tdTomato
o
Merge/DAPI
p
Lgr5-EGFP
q
tdTomato
r
Merge/DAPI
s
EGFP+tdTomato+ cells (%)
0
20
40
60
80
t
Average fold change
0
5
10
15
Control
Sox4
Brn3B

FIG. 8

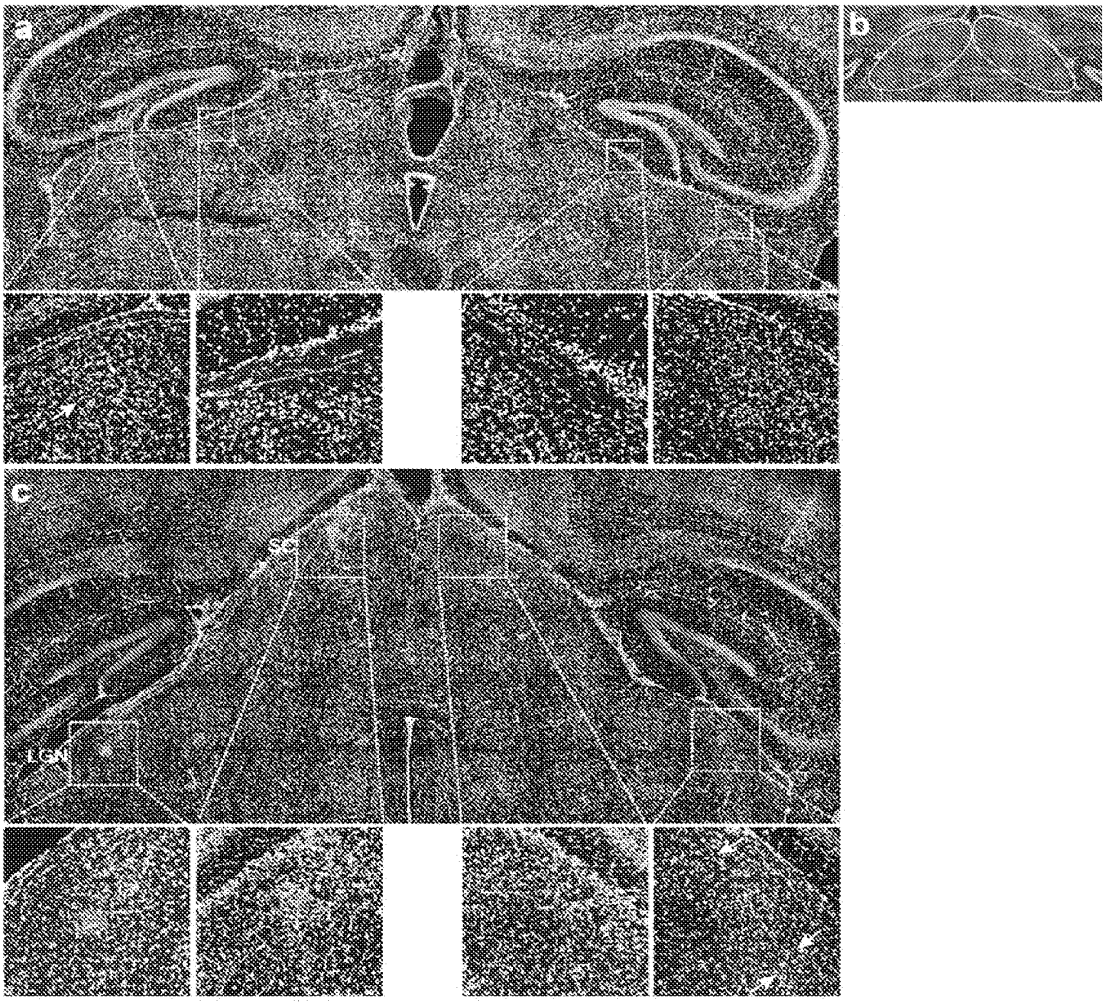


FIG. 9

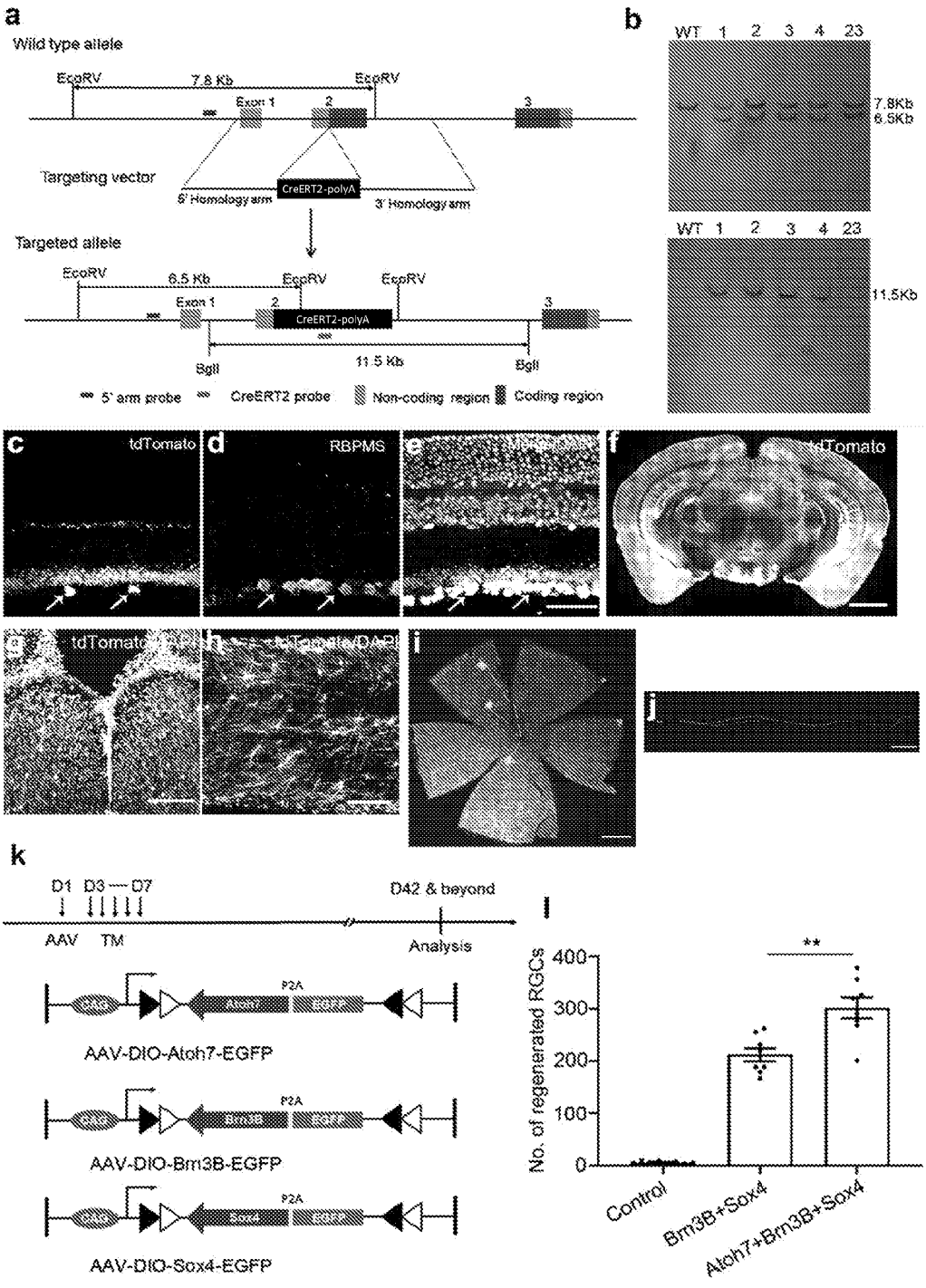

a
Wild type allele
EcoRV
7.8 Kb
EcoRV
Exon 1
2
3
Targeting vector
5' Homology arm
CreERT2-polyA
3' Homology arm
Targeted allele
EcoRV
6.5 Kb
EcoRV
EcoRV
Exon 1
2
CreERT2-polyA
3
BglI
11.5 Kb
BglI
5' arm probe
CreERT2 probe
Non-coding region
Coding region
b
WT 1 2 3 4 23
7.8Kb
6.5Kb
WT 1 2 3 4 23
11.5Kb
c
tdTomato
d
RBPMS
e
f
tdTomato
g
tdTomato
h
i
j
k
D1 D3 — D7
D42 & beyond
AAV TM
Analysis
P2A
AAV-DIO-Atoh7-EGFP
AAV-DIO-Brn3B-EGFP
AAV-DIO-Sox4-EGFP
l
No. of regenerated RGCs
400
300
200
100
0
**
Control
Brn3B+Sox4
Atoh7+Brn3B+Sox4

FIG. 10

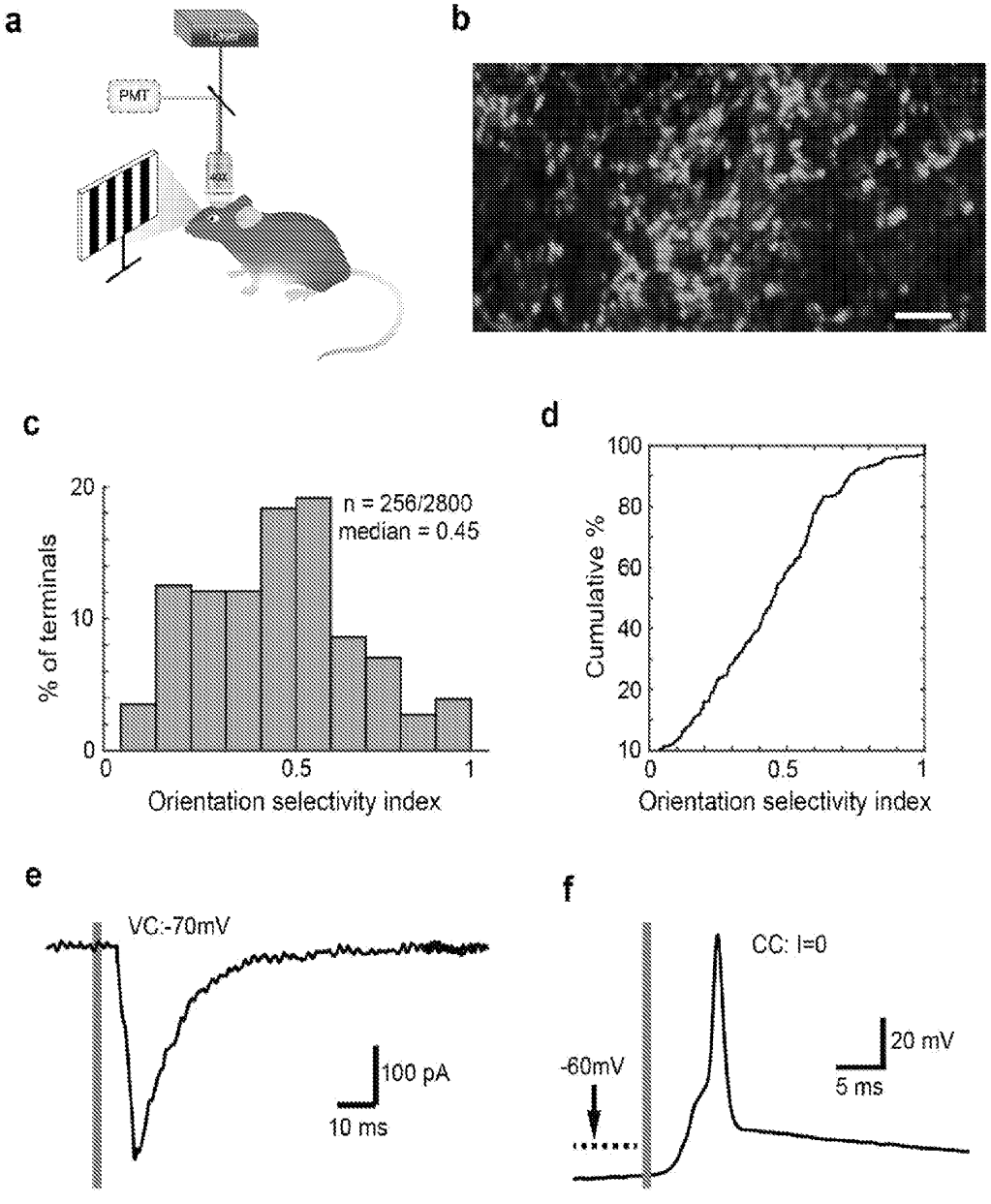
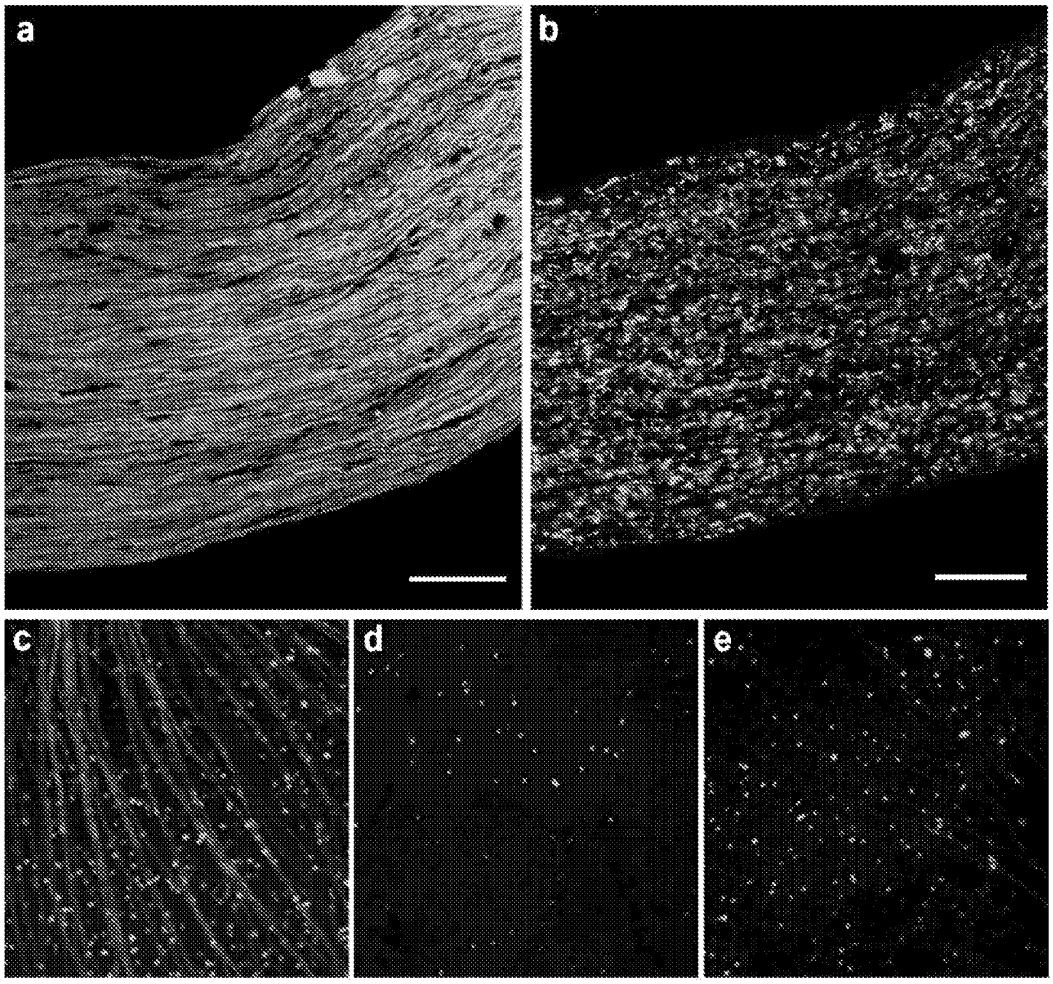

a
PMT
b
c
n = 256/2800
median = 0.45
% of terminals
Orientation selectivity index
d
Cumulative %
Orientation selectivity index
e
VC:-70mV
100 pA
10 ms
f
CC: I=0
-60mV
20 mV
5 ms

FIG. 11


a
b
c
d
e

f

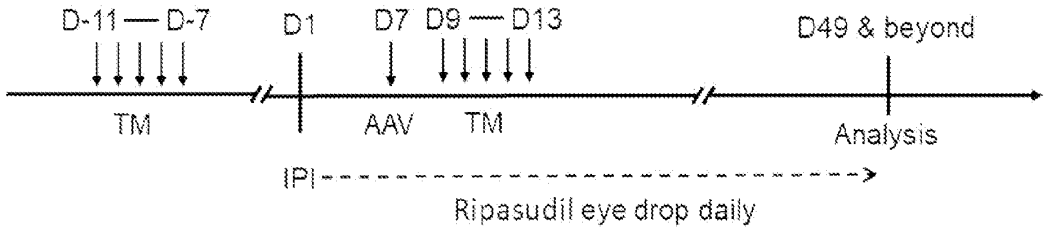

D-11 — D-7
D1
D7 D9 — D13
D49 & beyond
TM
AAV
TM
Analysis
IPI
Ripasudil eye drop daily

FIG. 12

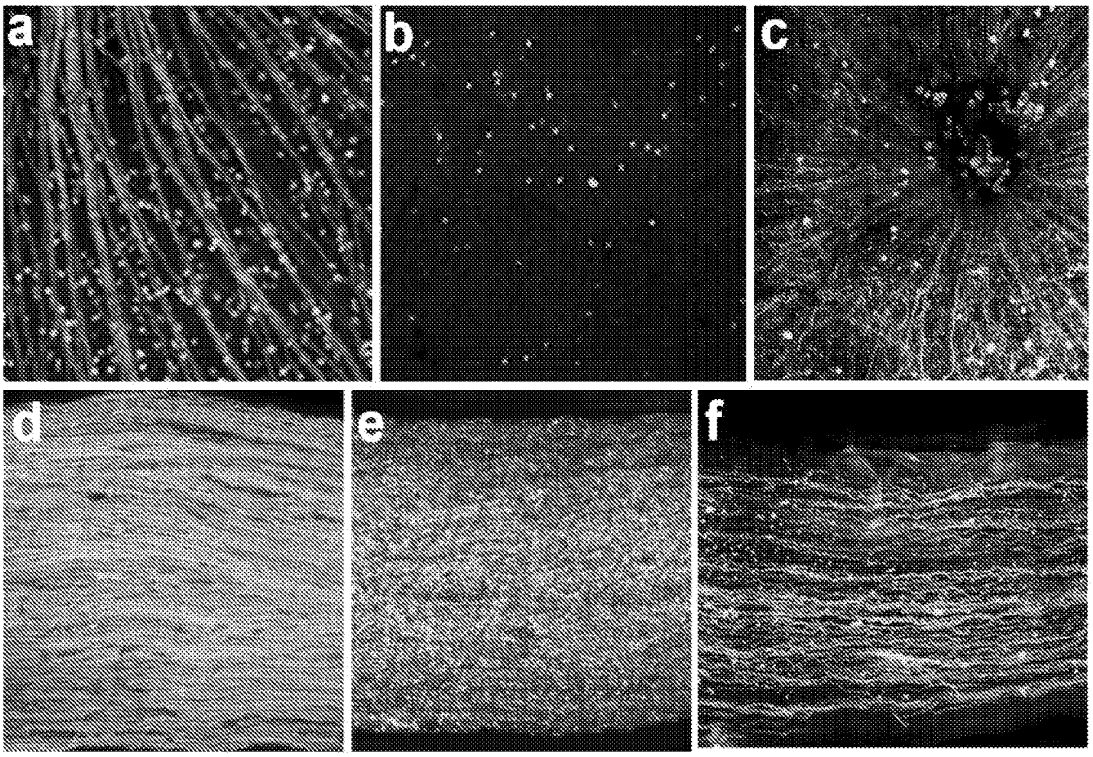


FIG. 13

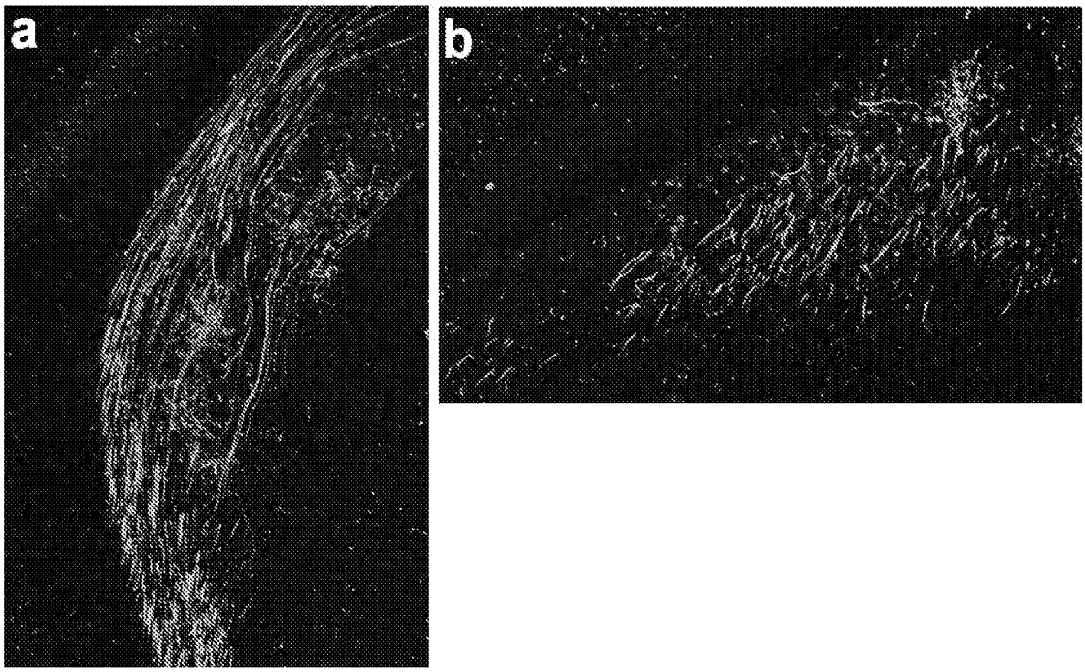


FIG. 14