Supplementary figure 1

A  whole-cell

bicuculline

10 mV

5 min

10 mV

1 min

5 sec

B  AP bursting

0 min  40 min

ERK1-Dorpa

RFP-MEK1

DIC

20 pA

1 min

vehicle

0 min  40 min

ERK1-Dorpa

RFP-MEK1

DIC

20 pA

1 min
Supplementary figure 2

A

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<tr>
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- pERK1/2 →
- pMSK1 →
- tubulin →

B

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- pERK1/2
- pMSK1
- Hoechst
- merge
Supplementary figure 3

A. ERK1-Dronpa, ERK-immunostaining, HOECHST

B. Bar graph showing fold ERK immunoreactivity

C. Images showing pre-bleach and post-bleach conditions

D. Graphs showing ratio of nuclei and fold nuclear signal over time post-bleach
Supplementary figure 5

A

B

Supplementary figure 5

A

B

Supplementary figure 5

A

B