

The radial organization of neuronal primary cilia is acutely disrupted by seizure and ischemic brain injury

Running title: Seizure, ischemia disrupt neuronal primary cilia

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Supplementary figure legends

Figure S1. Distribution of neuronal primary cilia angles in cortical layers

A, Shown are the distribution of angles of primary cilia with respect to the cortical surface ($^{\circ}$) in layers I-VI in area V1.

B, Shown are the distribution of angles of primary cilia with respect to the cortical surface ($^{\circ}$) in layers I-VI in area V2L.

C, Shown are the distribution of angles of primary cilia with respect to the cortical surface ($^{\circ}$) in layers I-VI in area A1.

D, Shown are the distribution of angles of primary cilia with respect to the cortical surface ($^{\circ}$) in layers I-VI in area Ent. Note that layer IV of Ent lacks cell bodies (lamina dissecans).

N= 159, 116, 76, 59 cells from V1, V2L, A1, and Ent (respectively) from 4 animals.

Figure S2. Distribution of neuronal primary cilia positions in cortical layers

A, Shown are the distribution of positions of primary cilia with respect to the cortical surface ($^{\circ}$) in layers I-VI in area V1.

B, Shown are the distribution of positions of primary cilia with respect to the cortical surface ($^{\circ}$) in layers I-VI in area V2L.

C, Shown are the distribution of positions of primary cilia with respect to the cortical surface ($^{\circ}$) in layers I-VI in area A1.

D, Shown are the distribution of angles of primary cilia with respect to the cortical surface ($^{\circ}$) in layers I-VI in area Ent. Note that layer IV of Ent lacks cell bodies (lamina dissecans).

N= 141, 118, 72, 54 cells from V1, V2L, A1, and Ent (respectively) from 4 animals

Figure S3. Distribution of primary cilia angles and positions among cortical parvalbumin-positive interneurons

A, Shown on the left is a representative image of a parvalbumin (PV)-positive neuron and its associated primary cilium (arrowhead) in area V1. On the right are the distributions of primary cilia angles and positions ($^{\circ}$) in area V1. The scale bar is 10 μ m.

B, Shown on the left is a representative image of a PV-positive neuron and its associated primary cilium (arrowhead) in area V2L. On the right are the distributions of primary cilia angles and positions ($^{\circ}$) in area V2L.

C, Shown on the left is a representative image of a PV-positive neuron and its associated primary cilium (arrowhead) in area A1. On the right are the distributions of primary cilia angles and positions ($^{\circ}$) in area A1.

D, Shown on the left is a representative image of a PV-positive neuron and its associated primary cilium (arrowhead) in area Ent. On the right are the distributions of primary cilia angles and positions ($^{\circ}$) in area Ent.

N= 12, 10, 10, 10 cells from V1, V2L, A1, and Ent (respectively) 4 animals.

A

B

C

D

V1

V2L

A1

Ent

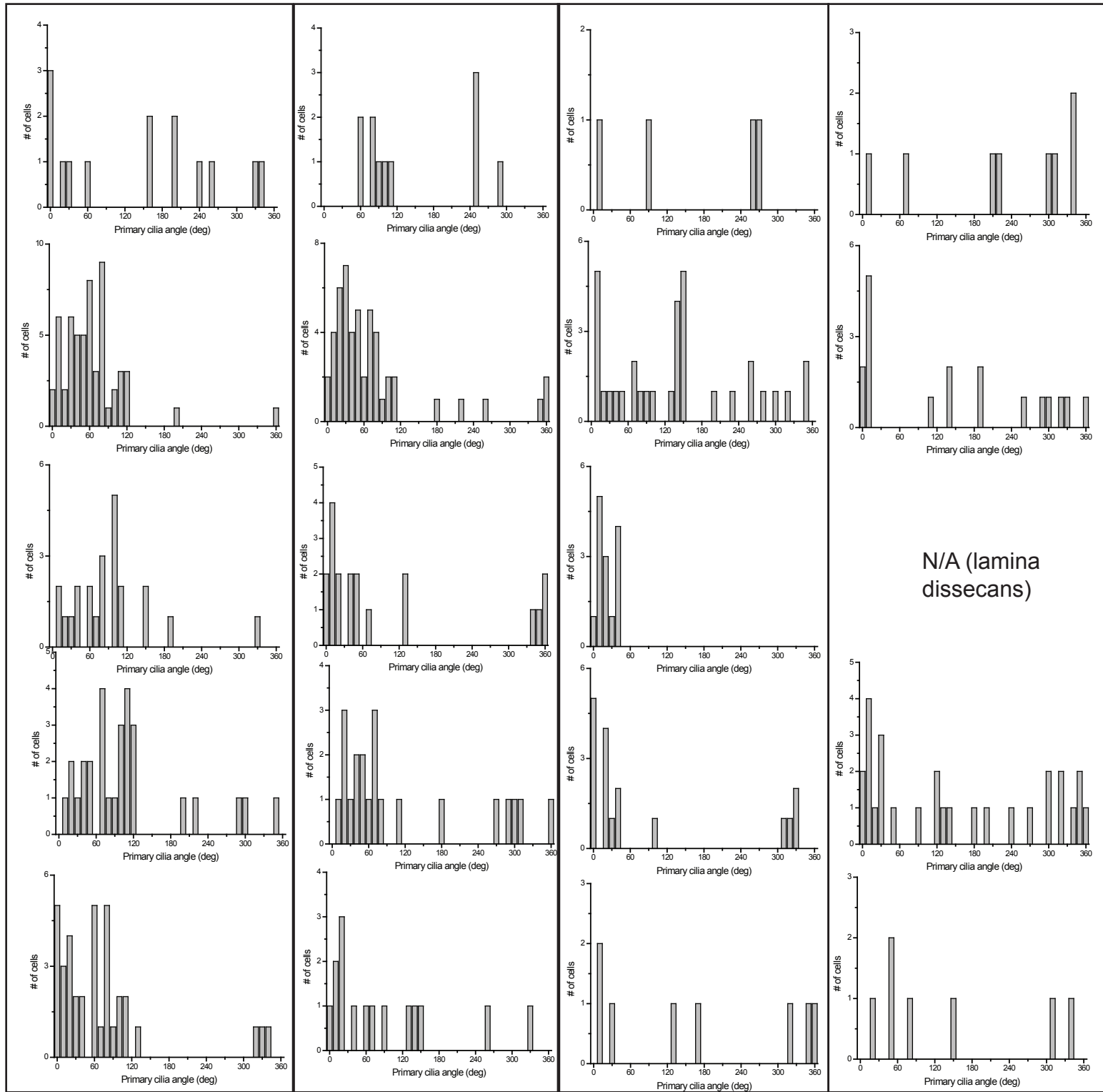


Figure S1

A

B

C

D

V1

V2

A1

Ent

LI

L II/III

LIV

LV

LVI

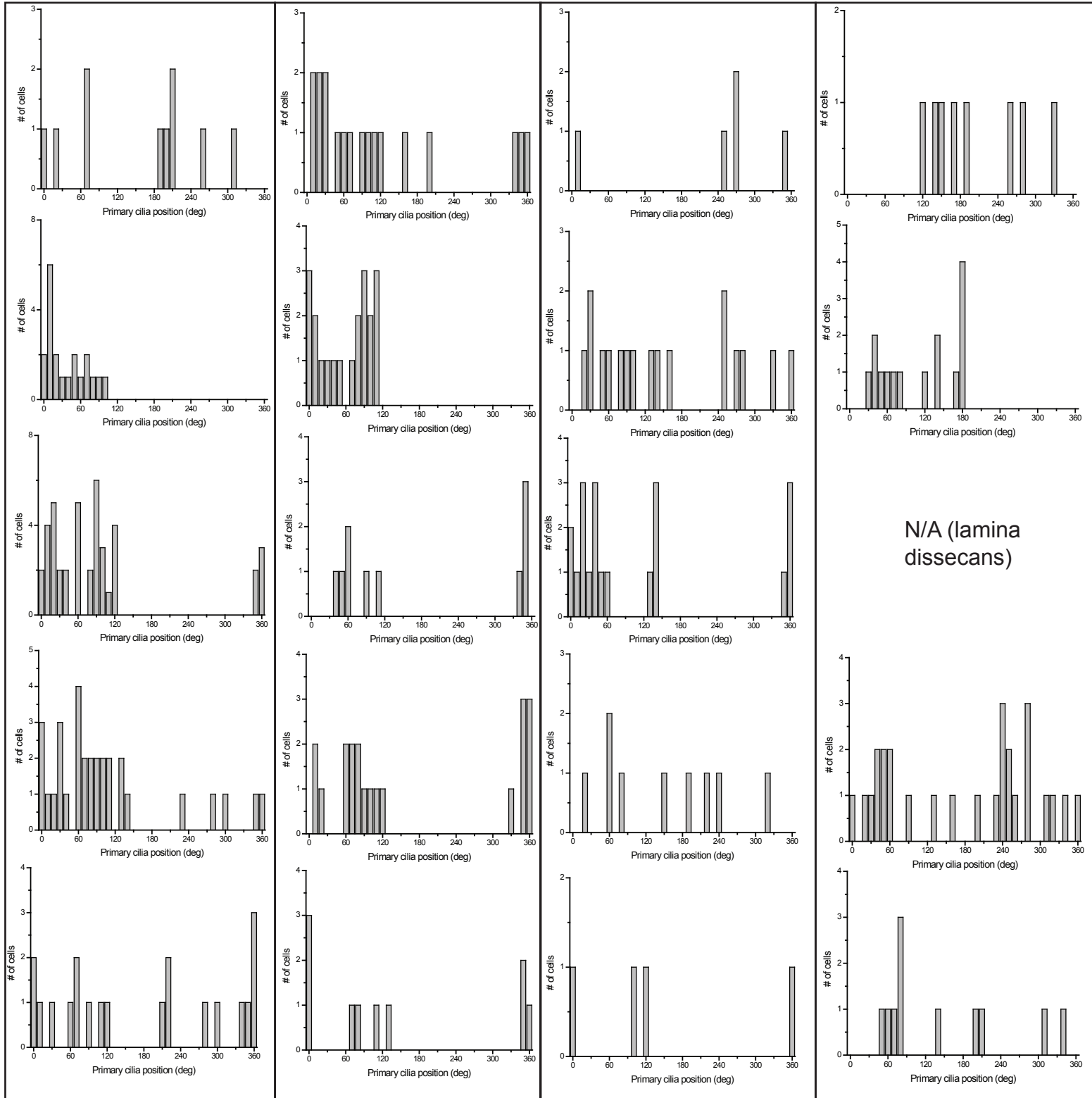


Figure S2

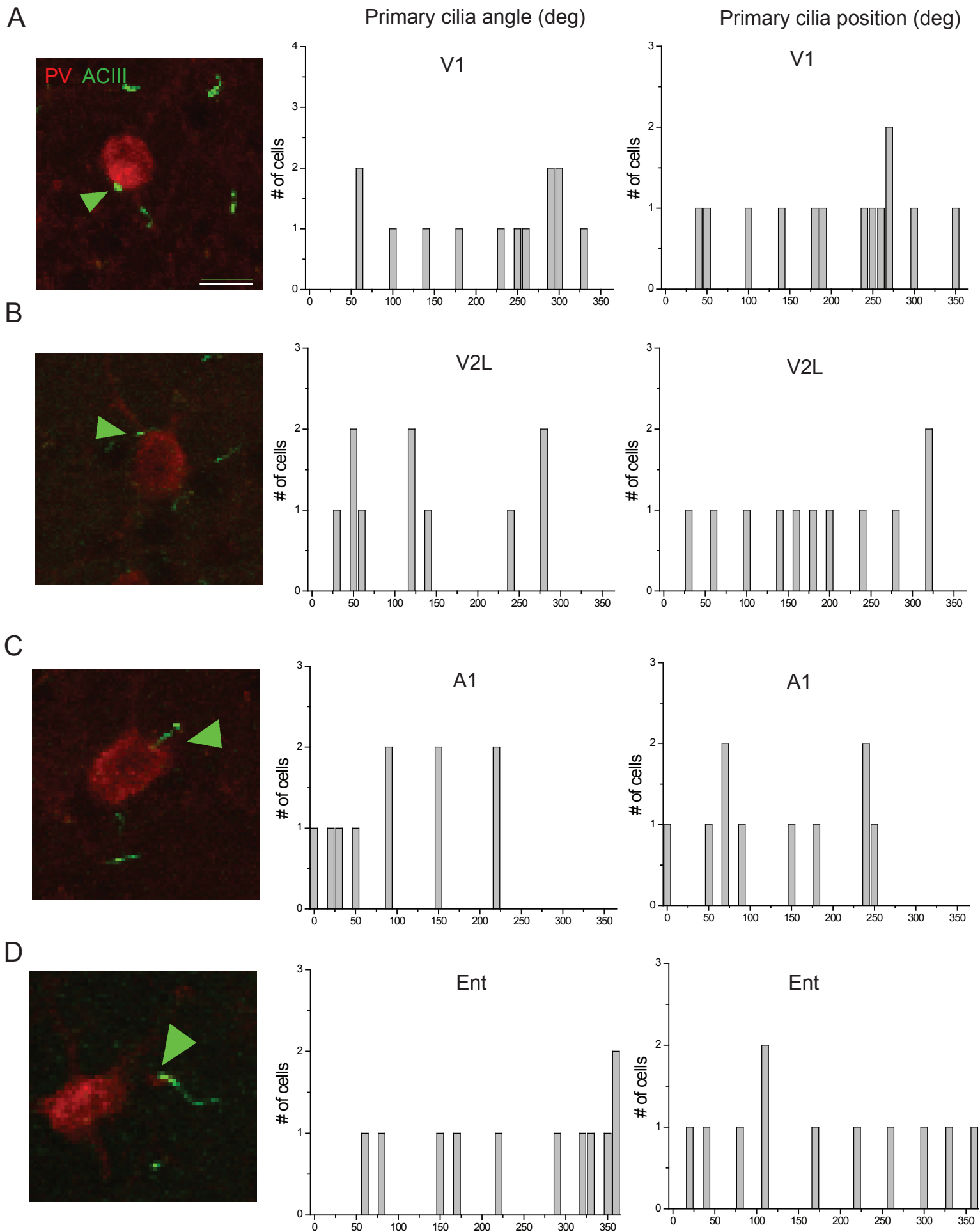


Figure S3