Figure S1.

A, Kvβ2-subunits are enriched at the AIS in cultured hippocampal neurons. Kvβ2 subunits (green) are located at the AIS where they colocalize with βIV spectrin (red). Somatodendritic domains are defined by MAP2 immunoreactivity (blue). Scale bar: 10 μm. **B,** Transfection with R1 shRNA expression plasmids eliminates immunostaining for PSD-93 at the AIS (arrowheads) of GFP+ cells, but PSD-93 immunoreactivity can be detected in untransfected GFP- neurons. Transfection with R1 shRNA expression plasmids dramatically reduces immunostaining for Kv1.4 at the AIS (inset, arrowheads) of GFP+ cells, but Kv1.4 immunoreactivity can be detected in untransfected GFP- neurons. **C,** Control shRNA expression plasmid transfected into hippocampal neurons has no effect on Kv1.1 clustering at the AIS (arrowheads). Transfection with R3 shRNA expression plasmids eliminates immunostaining for Kv1.1 at the AIS (arrowheads) of GFP+ cells; Kv1.1 immunoreactivity can be detected in untransfected GFP- neurons. Scale bar: 10 μm. Kv1.1 was detected at the AIS of 45.1% (transfected cell numer=133) of EGFP+ neurons. However, only 14.3% (transfected cell number=174) of EGFP + cells had detectable endogenous AIS Kv1.1 when transfected with the R3 shRNA expression plasmids.

Figure S2.

Transfection with control or R3 shRNA expression plasmids (to silence expression of PSD-93) does not result in the compensatory accumulation of PSD-95, SAP102, or SAP-97 at the AIS (arrowheads) of GFP+ cells. Scale bar: 10 μm.

Figure S3.

Neither protein 4.1N (**A,** green) nor protein 4.1G (**B,** green) colocalize with PanNav (red) at the AIS of cultured hippocampal neurons. Somatodendritic domains are defined by MAP2 immunoreactivity (blue). Scale bar: 10 μm.