

Front cover: Sodium-coupled neutral amino acid transporters SNAT1 and SNAT2 are considered to be the neuronal system A transporters that supply glutamine to neurons for synaptic transmission. SNAT1 is enriched in all parvalbumin-containing inhibitory neurons in the cortex and hippocampus, while SNAT2 is predominant in all pyramidal excitatory neurons. However, SNAT1 and SNAT2 are confined to the cell soma and proximal dendritic region and both are excluded from axon terminals suggesting that other unidentified neuronal glutamine transporters expressed in synapses support GABA and glutamatergic transmission. Shown is a merged confocal projection image (400X) of immunohistochemical staining in the rat hippocampal CA1 region for SNAT2 (red) with VGLUT1 (green). Non-biased imaging was provided by the LSUHSC Morphology and Imaging Core.

Read the full article 'Functional identification of activity-regulated, high-affinity glutamine transport in hippocampal neurons inhibited by riluzole' by J. D. Erickson (J. Neurochem. 2017, vol. 142 (1), pp. 29–40) on doi: 10.1111/jnc.14046

