![A picture containing photo, sitting, pink, green

Description automatically generated]()

**Supplemental Figure 1**. Micrographs at 20x magnification of PASD-stained hippocampus of mice fed normal chow (A) or the ketogenic diet (B).

**Supplemental Method**

*Brain glycogen synthase phosphorylation status determination*

Brain tissue was homogenized using 18G x 1½ BD PrecisionGlideTM needles in ice cold buffer: 50 mM Tris-HCl buffer [pH 8], 1 mM EDTA, 1 mM EGTA, 50 mM NaF, 10 mM Sodium β-glycerol phosphate, 5 mM sodium pyrophosphate, 2 mM DTT, protease and phosphatase inhibitor cocktails (Roche). Following centrifugation, supernatants were recovered for Western blotting with glycogen synthase (New England Biolabs, Cat# 3893), phosphorylated glycogen synthase (New England Biolabs, Cat# 3891), and GAPDH (Santa Cruz Biotechnology; sc-25778) antibodies.