

Figure S1. Total protein concentration in a fixed-volume punch of the VRC increases during hibernation. Quantification of total protein in a fixed volume of tissue punched from the VRC, NTS and CTX. Protein concentration is significantly increased in the VRC during T and IBA compared to SA (A), while total protein concentration does not fluctuate with behavioral state in the NTS and CTX (B,C). Data are normalized to SA protein concentrations. ** = $p < 0.005$. *** = $p < 0.001$.

Figure S2. Anatomical distribution of GAD67 immunoreactive neurons near the VRC that express δ subunit-containing GABA_ARs during interbout arousal and torpor. A. Three images were taken dorsolateral to the VRC (P1, P2, P3, respectively) in each of 8 coronal sections through the medulla (n=4 animals/behavioral state). B. The total number of neurons double labeled for GABA_ARs δ subunit and GAD67 in T and IBA combined is plotted with respect to the rostrocaudal position of the section (P1 green, P2 red, P3 black). The regression line for each sample area (P1, P2, P3) is plotted in the same color. There were significantly more double-labeled neurons in the P3 location than P1, although the number of double-labeled neurons did not differ significantly by rostrocaudal position. C. Dashed grey bars indicate the approximate location of sections in a parasagittal schematic of nuclei in the medulla. BötC, Bötzing complex; Pre-BötC, pre-Bötzing complex; NAc, compact nucleus ambiguus; NAsc, semicompact nucleus ambiguus; rVRG, rostral ventral respiratory group; cVRG, caudal ventral respiratory group; NTS, nucleus of the solitary tract; XII, hypoglossal nucleus. Scale bar in A = 500 μ m.