

Supplementary Table 1 Physiological parameters of rats in control and isoelectric conditions

	Control (Fent + Pento) (n = 10 rats)	Iso (n = 5 rats)	
Heart rate (b.p.m)	423.5 ± 8.7	339.6 ± 5.2	***
SpO ₂ (%)	91.1 ± 1.7	91.2 ± 3.0	n.s.
EtCO ₂ (%)	4.4 ± 0.2	4.3 ± 0.3	n.s.
Respi. rate (c.p.m)	89.9 ± 3.4	93.8 ± 5.8	n.s.
Temp. (°C)	36.9 ± 0.05	36.9 ± 0.06	n.s.

Statistical comparisons were made between pooled control values (Fent + Pento) and isoelectric condition (Iso). *** $P < 0.001$; n.s., non-significant.

Supplementary Table 2 Neuronal parameters in control and isoelectric conditions

<i>Neocortex</i>	Control	<i>n</i>	Iso	<i>n</i>	
<i>V_m</i> (mV)	-66.1 ± 1.1	22	-70.4 ± 1.1	22	**
<i>R_m</i> (MΩ)	21 ± 1.8	19	20.4 ± 2.1	19	n.s.
<i>τ_m</i> (ms)	6.7 ± 0.4	19	6.5 ± 0.4	19	n.s.
AP amplitude (mV)	65.8 ± 1.2	22	65.9 ± 1.4	14	n.s.
AP duration (ms)	1.2 ± 0.05	22	1.2 ± 0.06	14	n.s.
Evoked AP threshold (mV)	-53.6 ± 1.2	13	-54.1 ± 0.9	5	n.s.
I _{th} (nA)	0.09 ± 0.06	12	0.64 ± 0.12	12	***

<i>Thalamus</i>	Control	<i>n</i>	Iso	<i>n</i>	
<i>V_m</i> (mV)	-62.6 ± 2.2	7	-69.7 ± 1.9	7	*
<i>R_m</i> (MΩ)	21.4 ± 2.2	7	20.1 ± 4.2	7	n.s.
<i>τ_m</i> (ms)	10.6 ± 1.7	7	7.4 ± 1.0	7	n.s.
AP amplitude (mV)	50.5 ± 1.6	7	49.7 ± 2.3	3	n.s.
AP duration (ms)	1.2 ± 0.07	7	1.3 ± 0.04	3	n.s.
I _{th} (nA)	0.18 ± 0.06	4	1.3 ± 0.3	5	*

<i>Hippocampus</i>	Control	<i>n</i>	Iso	<i>n</i>	
<i>V_m</i> (mV)	-64.4 ± 2.4	3	-73.5 ± 2.2	4	*
<i>R_m</i> (MΩ)	29.7 ± 5.7	3	33.2 ± 6.8	4	n.s.
<i>τ_m</i> (ms)	12.9 ± 2.7	3	10.8 ± 0.9	4	n.s.
AP amplitude (mV)	76.2 ± 2.5	3	79.4 ± 2.5	4	n.s.
AP duration (ms)	1.2 ± 0.1	3	1.2 ± 0.05	4	n.s.
I _{th} (nA)	0.04 ± 0.04	3	0.20 ± 0.07	4	*

Statistical comparisons were made between pooled control values (Fent + Pento) and isoelectric condition (Iso). *V_m*, membrane potential; *R_m*, membrane resistance; *τ_m*, membrane time constant; AP, action potential; I_{th}, minimal current intensity to fire the cell. **P* < 0.05; ***P* < 0.01; ****P* < 0.001; n.s., non-significant.