SUPPLEMENTAL MATERIAL

Partial white and grey matter protection with prolonged infusion of recombinant

human erythropoietin after asphyxia in preterm fetal sheep

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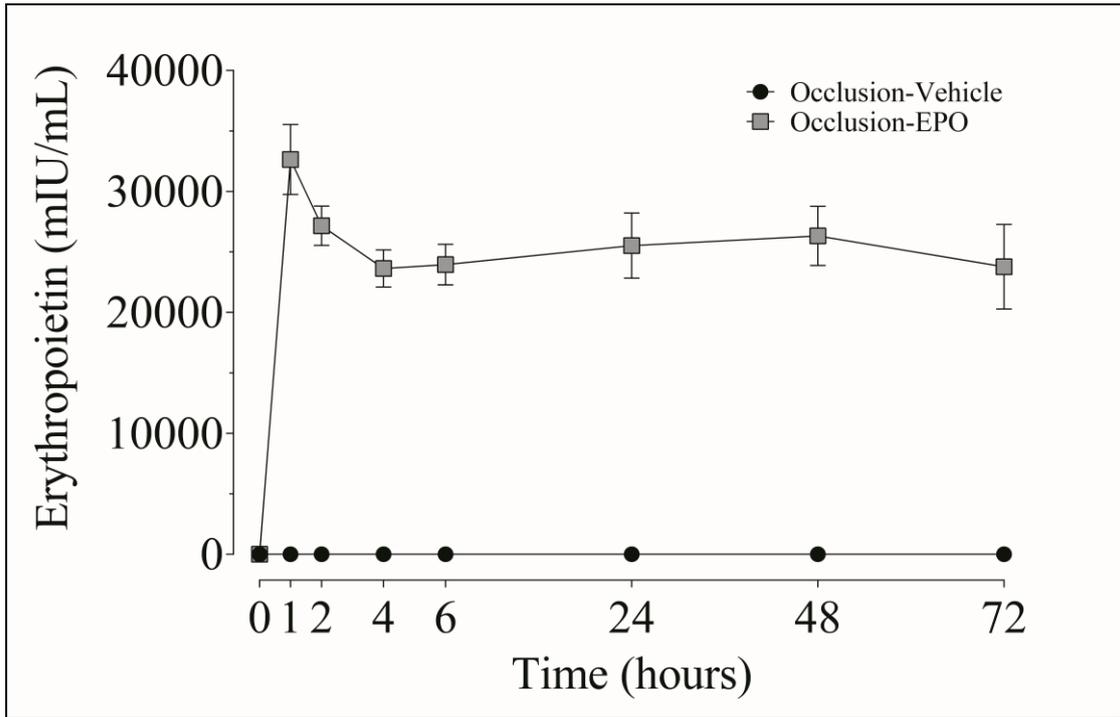
Supplementary Figure 1. Fetal arterial plasma Epo concentrations (in mU/mL) in the occlusion-vehicle (closed circles) and occlusion-EPO (closed squares) animals at 60 min before the occlusion (baseline), and 1, 2, 4, 6, 24, 48, and 72 h after umbilical cord occlusion. Epo was administered intravenously (i.v.) from 30 min until 72 h (loading bolus 5000 U, followed by an infusion of 833.25 U/h (2500 U/mL at 0.333 mL/h). Erythropoietin, Epo. Data are mean ± SEM.
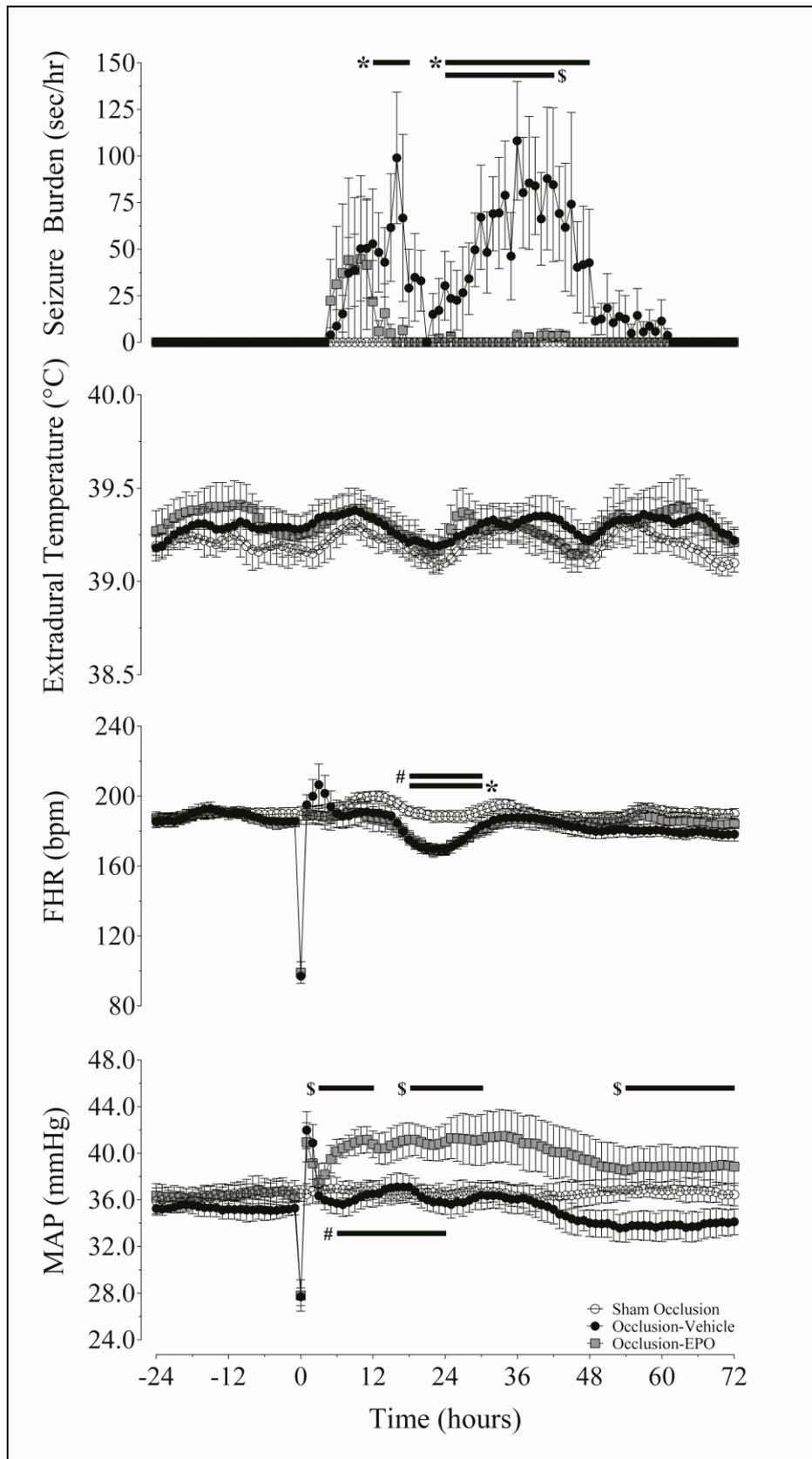
Supplementary Figure 2. Changes in seizure burden (sec/h), extradural temperature (ºC), fetal heart rate (FHR, bpm), and mean arterial pressure (MAP, mmHg) in the sham occlusion (open circles), occlusion-vehicle (closed circles), and occlusion-EPO animals (closed squares). Time point zero denotes the 25 min period of umbilical cord occlusion. Erythropoietin, Epo. Data are hourly averages and presented as mean ± SEM. *P<0.05, occlusion-vehicle *vs.* sham occlusion; #P<0.05, occlusion-EPO *vs.* sham occlusion; $P<0.05, occlusion-vehicle *vs.* occlusion-EPO.

	Sham Occlusion	Occlusion Vehicle	Occlusion EPO
CAUDATE	A	B	C
PUTAMEN	D	E	F
CA1/2	G	H	I
CA3	J	K	L
CA4	M	N	O
DG	P	Q	R
MN	S	T	U
MGN	V	W	X
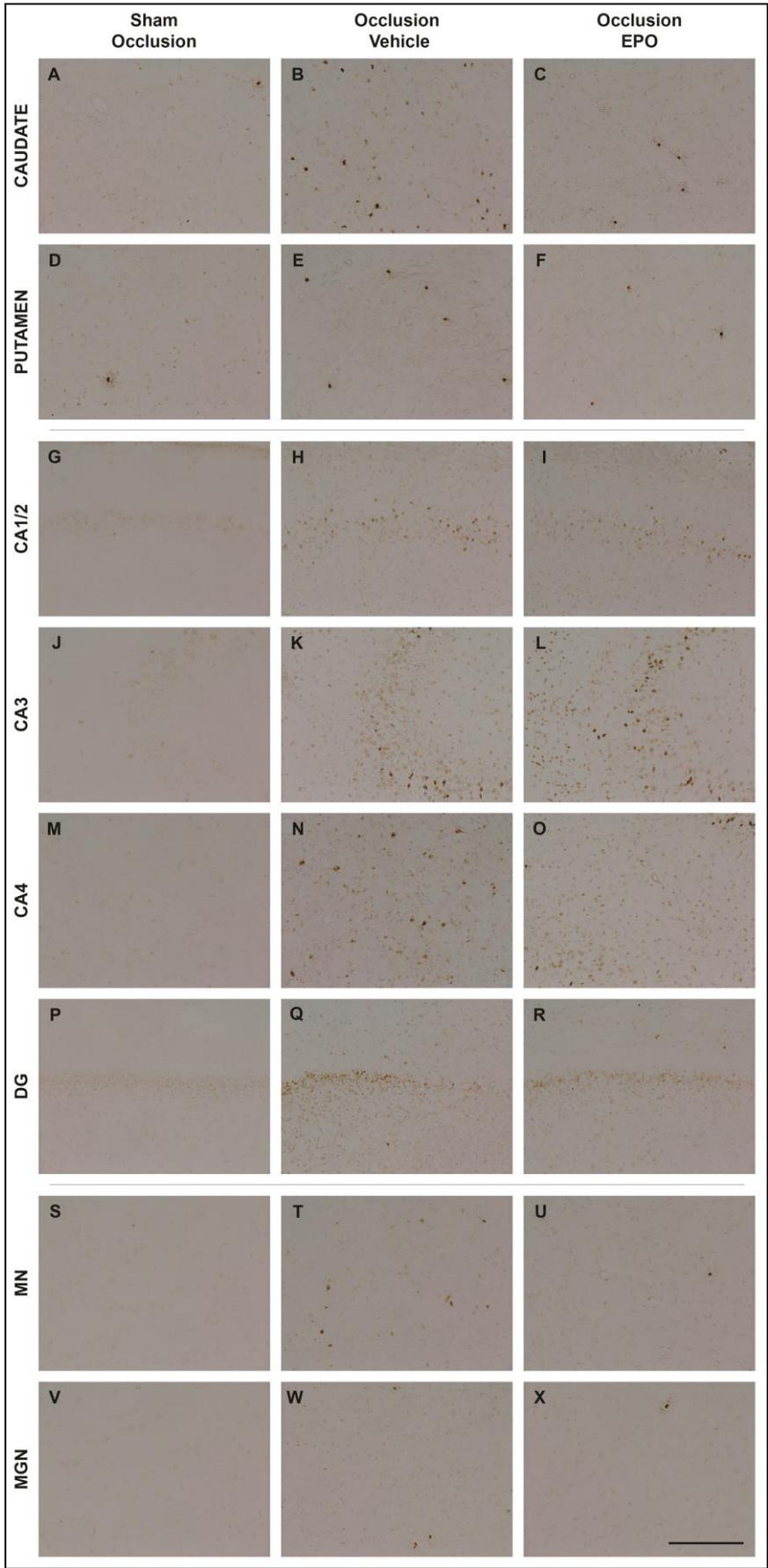
Supplementary Figure 3. Photomicrographs of caspase3 -positive cells in the striatal caudate nucleus (caudate, panel A-C) and putamen (panel D-F), CA1/2 (panel G-I), CA3 (panel J-L), CA4 (panel M-O) and dentate gyrus (DG, panel P-R) of the hippocampus, and thalamic medial nucleus (MN, panel S-U) and medial geniculate nucleus (MGN, panel V-X) from the sham occlusion (left column), occlusion-vehicle (middle column), and occlusion-EPO (right column) groups at 3 days after severe asphyxia. Scale bar is 200 μm.

Supplementary Table 1. Fetal post-mortem findings

Group	N	Fetus (g)	Brain (g)	Heart (g)	Liver (g)	Kidney (g)	Singleton : Twin	Female : Male
SHAM	9	1507 ± 54	29.3 ± 0.9	13.0 ± 0.8	64.2 ± 3.6	7.7 ± 0.6	7 : 2	4 : 5
OCCL-VEH	9	1680 ± 106	25.2 ± 0.7*	12.2 ± 0.5	76.7 ± 3.0	7.3 ± 0.4	8 : 1	5 : 4
OCCL-EPO	8	1460 ± 64	26.4 ± 0.8	13.1 ± 0.6	106.8 ± 6.9#	7.1 ± 0.2	4 : 4	6 : 2

Fetal biological parameters for the sham occlusion (SHAM), occlusion-vehicle (OCCL-VEH), and occlusion-erythropoietin (OCCL-EPO) animals. Weights are gram (g). Data are mean ± SEM; between-group comparisons by Kruskal-Wallis ANOVA. *$P < 0.05$ *vs.* sham occlusion; #$P < 0.05$ *vs.* sham occlusion and occlusion-vehicle.