Supplementary Materials

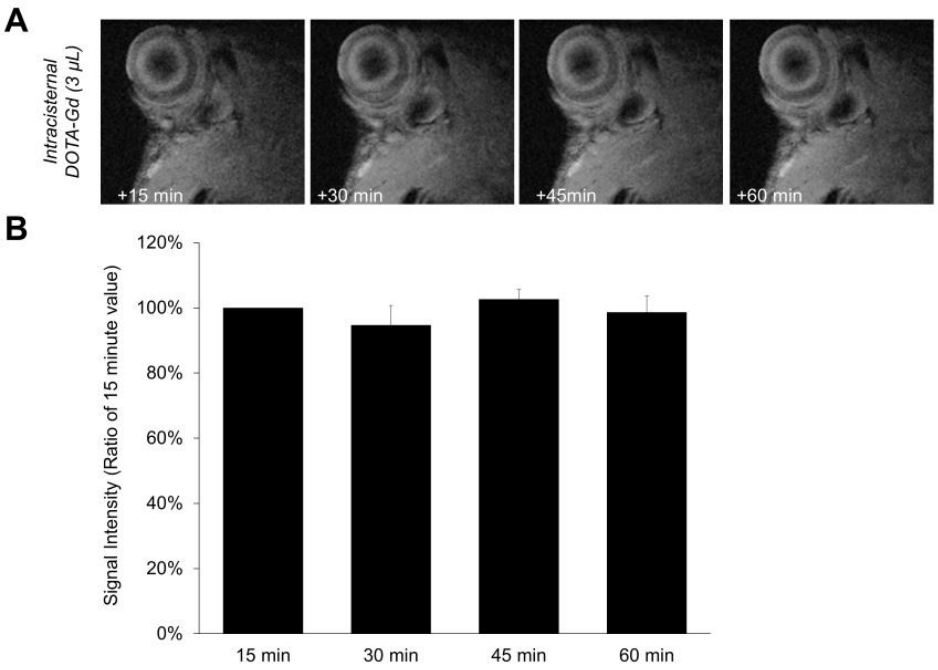

Figure S1: Lack of enhancement of the vitreous humor of the right eye after intracisternal injection of DOTA-Gd. (A) Representative T1-weighted images of the right eye at four different time points after intracisternal injection of DOTA-Gd (3 µl). **(B)** Corresponding quantification of the signal (the signal intensity was normalized to the 15-minute value). (n=4 per group).

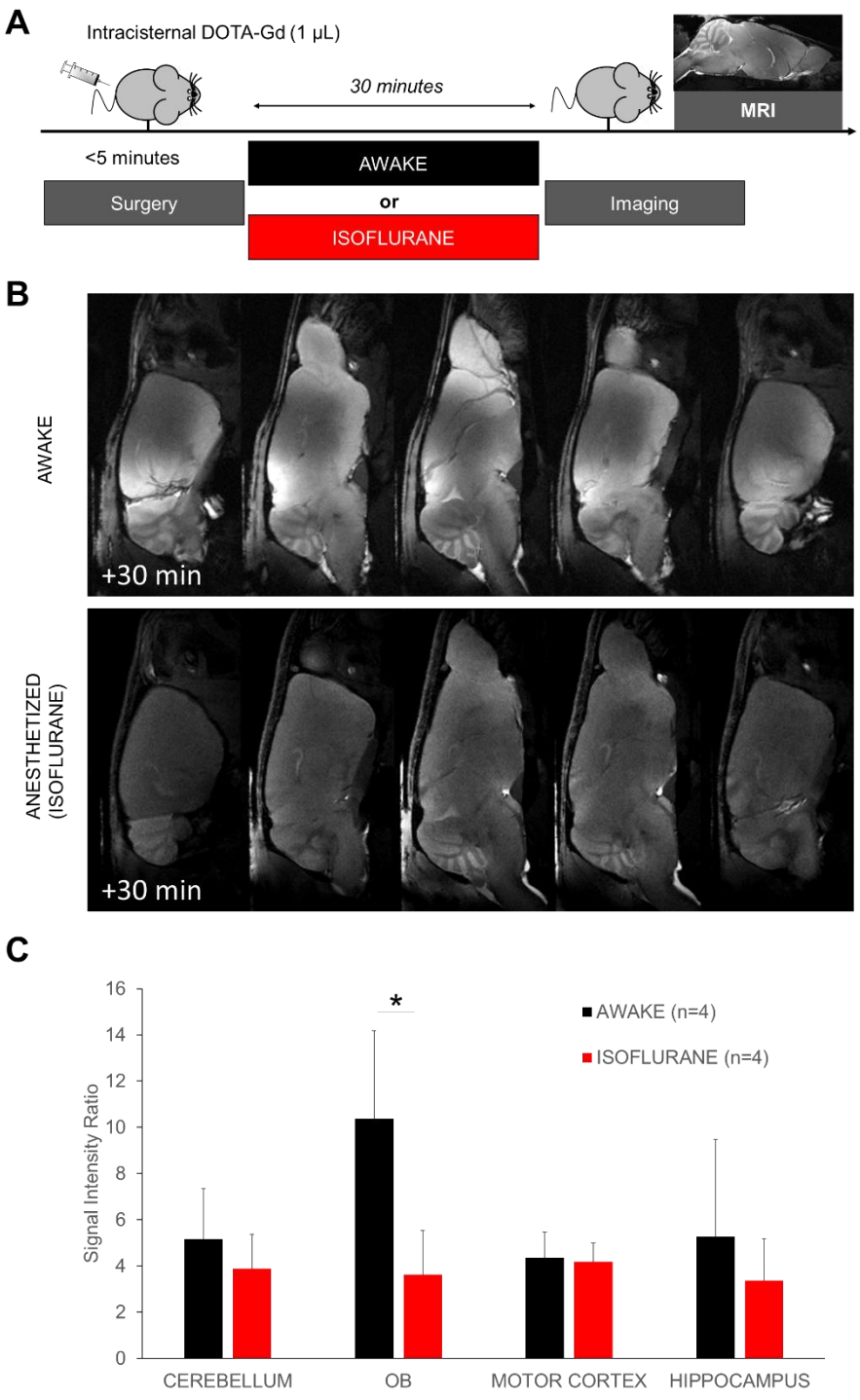

Figure S2: Gadolinium-enhanced magnetic resonance imaging after 30 minutes of wakefulness or isoflurane general anesthesia (2-2.5%). (A) Schematic representation of the experimental design of the Magnetic Resonance Imaging (MRI) experiments. **(B)** Representative high-resolution T1-weighted images 30 minutes after intracisternal injection of DOTA-Gd (1 µL) in awake (top) and anesthetized mice (bottom). **(C)** Corresponding

quantification of the signal intensity in four different regions of interest (Cerebellum, Olfactory Bulbs (OB), Motor Cortex and Hippocampus). (n=4 mice per group).

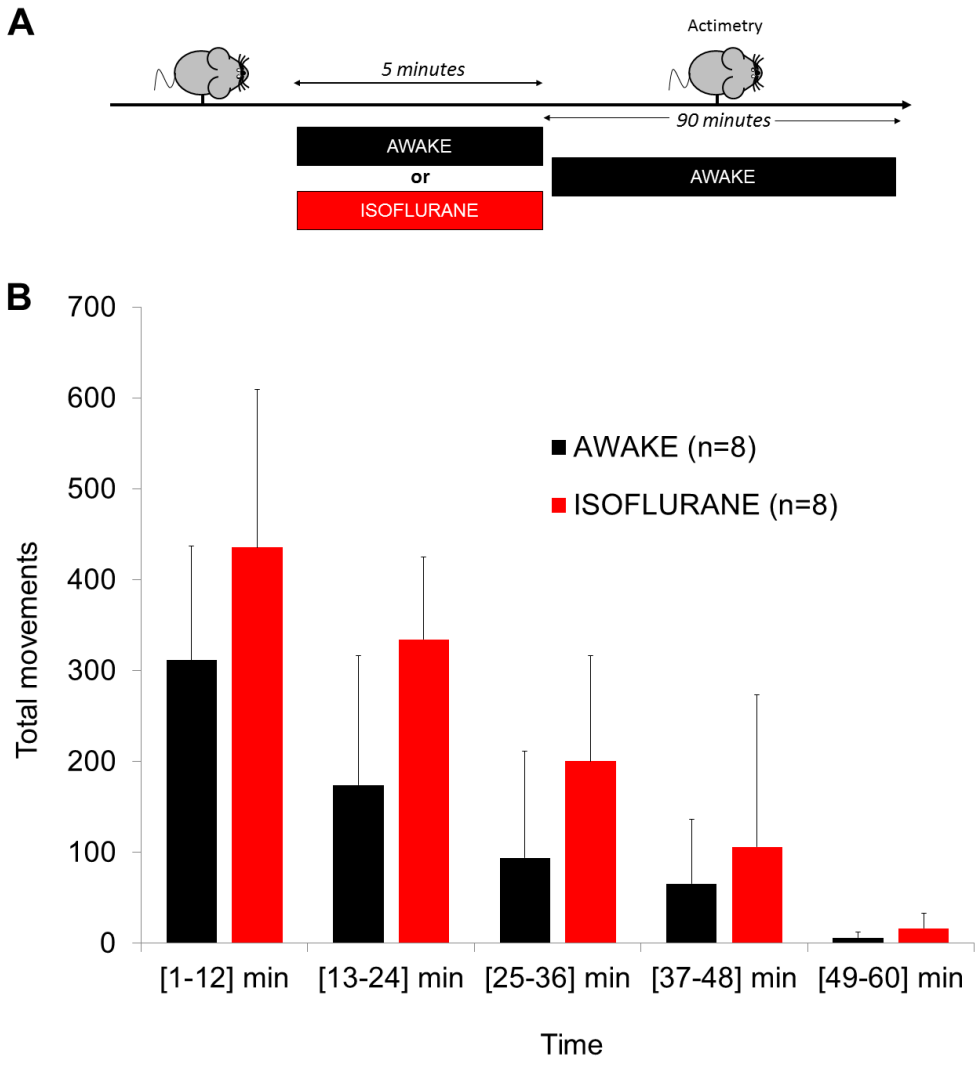

Figure S3: Mice recover rapidly from a short isoflurane anesthesia in terms of locomotor activity. (A) Schematic representation of the actimetry experiments performed. **(B)** Total movements were quantified during 60 minutes in control mice and in mice that just recovered from a short isoflurane anesthesia (2-2.5%, n=8). No significant difference in actimetry were observed between the two groups of mice.

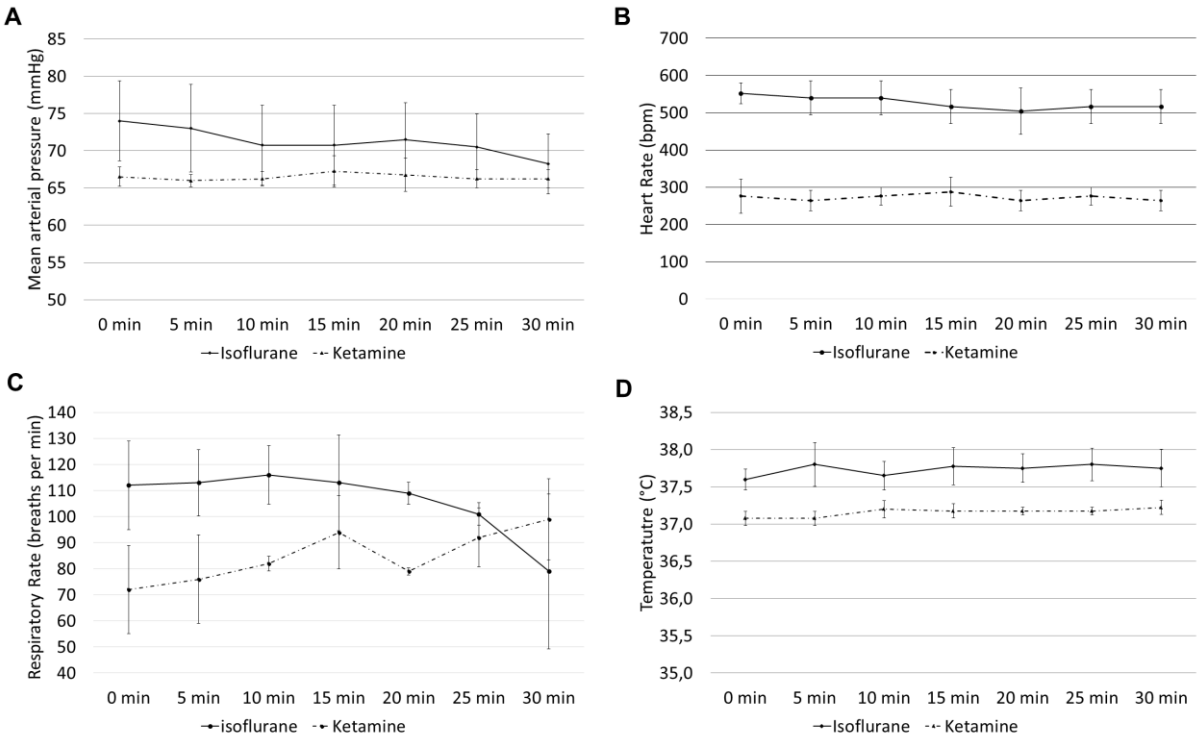

Figure S4: Physiological monitoring data. Mean arterial pressure **(A)**, heart rate **(B)**, respiratory rate **(C)** and temperature **(D)** were monitored during 30 minutes in isoflurane (2-2.5%) and ketamine anesthetized mice (n=5 per group). Only the heart rate significantly differed between the two groups at all time points.

Supplementary Video 1: Longitudinal in vivo NIRF imaging of an awake mouse before and after intracisternal indocyanine green injection. The tracer diffused in the brain and was readily detected in the forebrain.

Supplementary Video 2: Longitudinal in vivo NIRF imaging of an anesthetized mouse (isoflurane 2-2.5%) before and after intracisternal indocyanine green injection. The tracer did not diffuse in the brain and remained near the injection site in the cisterna magna.