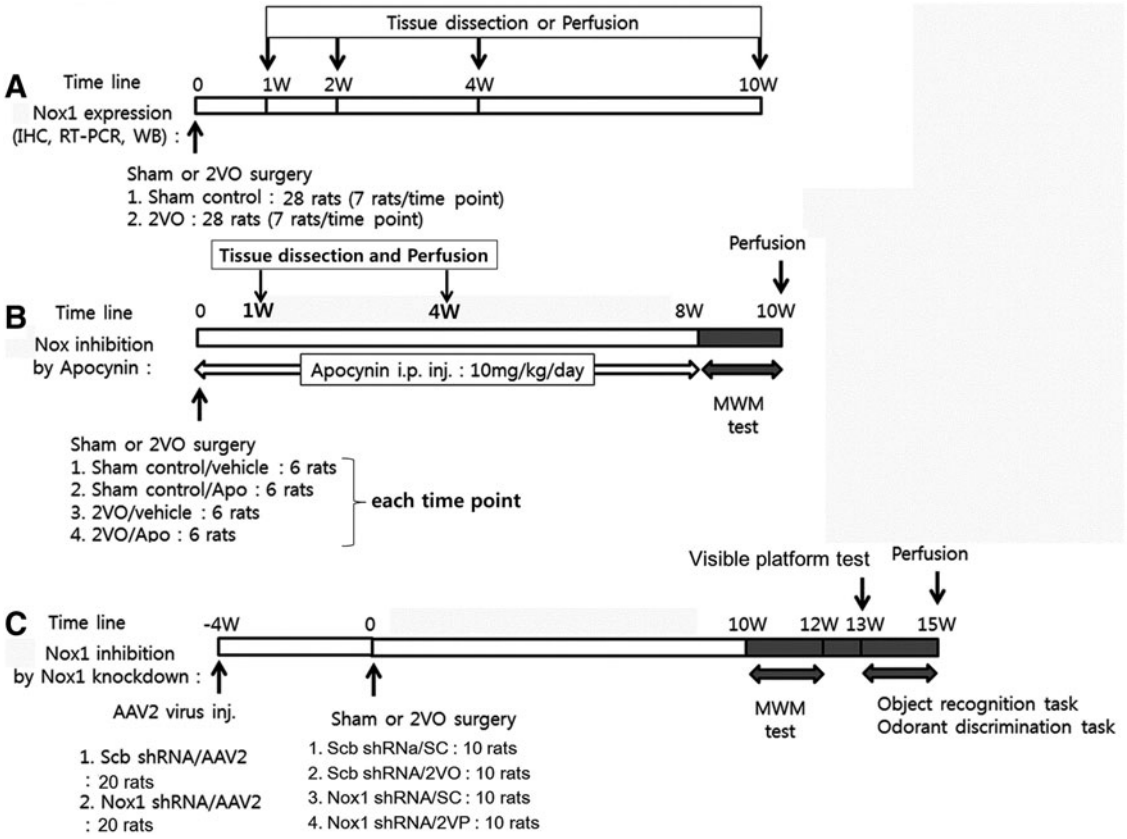

SUPPLEMENTARY FIG. S6. Allocation table for each group and the timeline of the experiment. Rats submitted to sham operation (sham-op) or permanent occlusion of bilateral common carotid arteries (2VO). Mortality and blindness occurred only in rats with 2VO. Escape latency longer than mean plus three SD of sham-op rats was used as an arbitrary cut-off to determine blindness (total blinded rats, $n = 7$). **(A)** Sham-op and 2VO rats were used for gene expression studies (RT-PCR, $n = 3$, the left hemisphere of the brain) and protein expression studies (western blots, $n = 3$, the right hemisphere of the brain) and immunohistochemical analysis (immunohistochemistry, $n = 3$ or 4) at 1, 2, 4, and 10 weeks after operation. **(B)** Rats submitted to sham-op or 2VO that were treated with apocynin (Apo, IP injection of 10 mg/kg/day apocynin) or vehicle from days 0–56 post-2VO were used for behavioral analysis ($n = 6$/group) and immunohistochemical analysis ($n = 6$/group). Proinflammatory cytokine gene expression studies (real-time PCR, $n = 3$) and immunohistochemical analysis in common carotid artery (immunohistochemistry, $n = 6$) were carried out at 1 and 4 weeks after 2VO operation treated with apocynin or vehicle. **(C)** In Nox1 knockdown study, AAV particles containing either Nox1 shRNA/AAV (Nox1shRNA) or Scb shRNA were stereotaxically injected into hippocampal CA1 subfield at 4 weeks before the 2VO or sham-op. Rats were allocated into four groups: sham-op rats injected with scramble shRNA AAV particles (ScbRNA control, $n = 10$), sham-op rats injected with Nox1 shRNA AAV particles (Nox1shRNA control, $n = 10$), 2VO rats injected with scramble shRNA AAV particles (ScbRNA 2VO, $n = 10$), and 2VO rats injected with Nox1 shRNA AAV particles (Nox1 shRNA 2VO, $n = 10$). All groups were used for behavioral analysis (except Nox1shRNA control) from 10 weeks postoperation and for immunohistochemical analysis ($n = 5$/group) at 15 weeks postoperation. Seven rats that failed behavioral training have been excluded from animals for odorant discrimination tasks ($n = 8$/group). All animals were sacrificed at 1 day after the behavioral test for histological study. 2VO, two-vessel occlusion; NADPH, nicotinamide adenine dinucleotide phosphate; Nox1, NADPH oxidase 1; RT-PCR, reverse transcription–polymerase chain reaction.