



**SUPPLEMENTARY FIG. S3.** Evaluation of transgene expression in the lungs after initial fetal and neonatal vector delivery and subsequent readministration in adult life. Shown is  $\beta$ -Gal expression in the lower airways (lungs) as detected by X-Gal staining after fetal and neonatal rAAV2/5 administration ( $1.0 \times 10^{10}$  GC/animal) and readministration at 3 months. Representative images of various regions of the conducting airways are given, showing the trachea, bronchi, and bronchioles (original magnification,  $\times 250$ ).  $\beta$ -Gal expression was visualized at 1 month (**A** and **B**) and 4 months (**C** and **D**) for animals receiving a single dose as fetus or neonate and at 4 months (or 1 month after readministration) for animals that received a second vector dose at 3 months (**E** and **F**). (**G**)  $\beta$ -Gal expression in the conducting airways is demonstrated 1 month after intratracheal instillation of a single vector dose to adult control mice. (**H**) Absence of X-Gal staining in negative control lungs. Scale bar:  $100 \mu\text{m}$ . *Abbreviations:* 1 and 4 m, 1 and 4 months after perinatal gene transfer; 4 m-R, 1 month after readministration/4 months after initial perinatal gene transfer.