

## SUPPLEMENTARY FIGURE LEGENDS

**Supplementary FIG. 1. An AAV-*Klf15* dose of 1E10 vg/pup does not provide additional survival benefits compared to a dose of 2E10 vg/pup.** Survival curves of *Smn<sup>-/-</sup>;SMN2* SMA mice that received a single facial vein intravenous injection at post-natal day (P) 0 of 1E10 vg/pup of AAV8-*Klf15* (n = 10) or 2E10 vg/pup of AAV8-*Klf15* (n = 7). Data are Kaplan-Meier survival curves, Gehan-Breslow-Wilcoxon test, \* $p = 0.0113$ .

**Supplementary FIG. 2. AAV8-Spc-12 tropism is greater in heart and liver of neonatal pups.** Post-natal day (P) 0 *Smn<sup>-/-</sup>;SMN2* SMA mice and control littermates received a single facial vein intravenous injection of AAV8-*GFP* or AAV8-*Klf15* (2E10 vg/pup). qPCR analysis of AAV8 expression in quadriceps, heart and liver of P2 and P7 AAV8-*GFP* and AAV8-*Klf15*-treated mice. Data are scatter plot and mean  $\pm$  SEM, n = 6–8 animals per experimental group, two-way ANOVA, \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.0001$ .