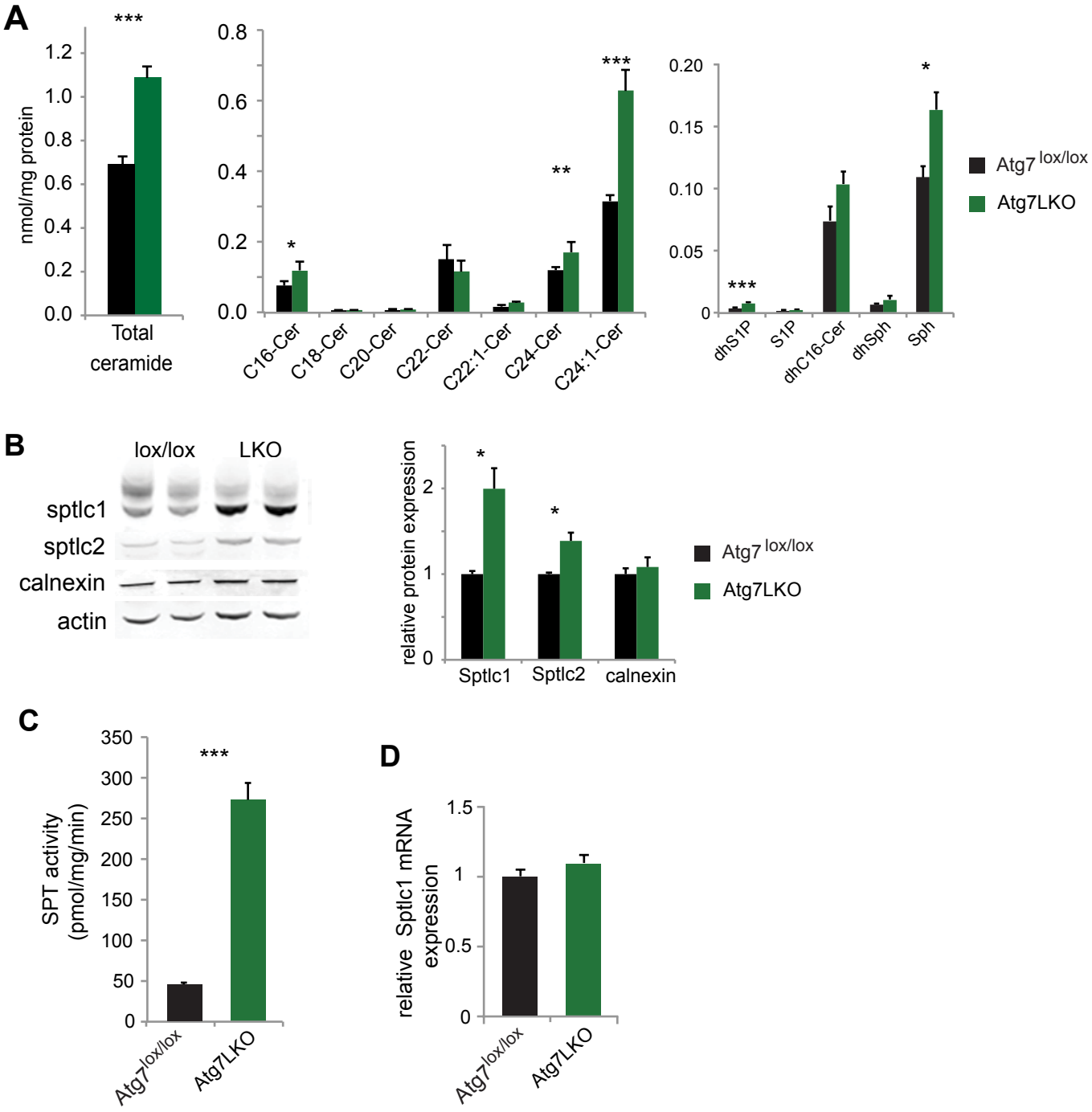
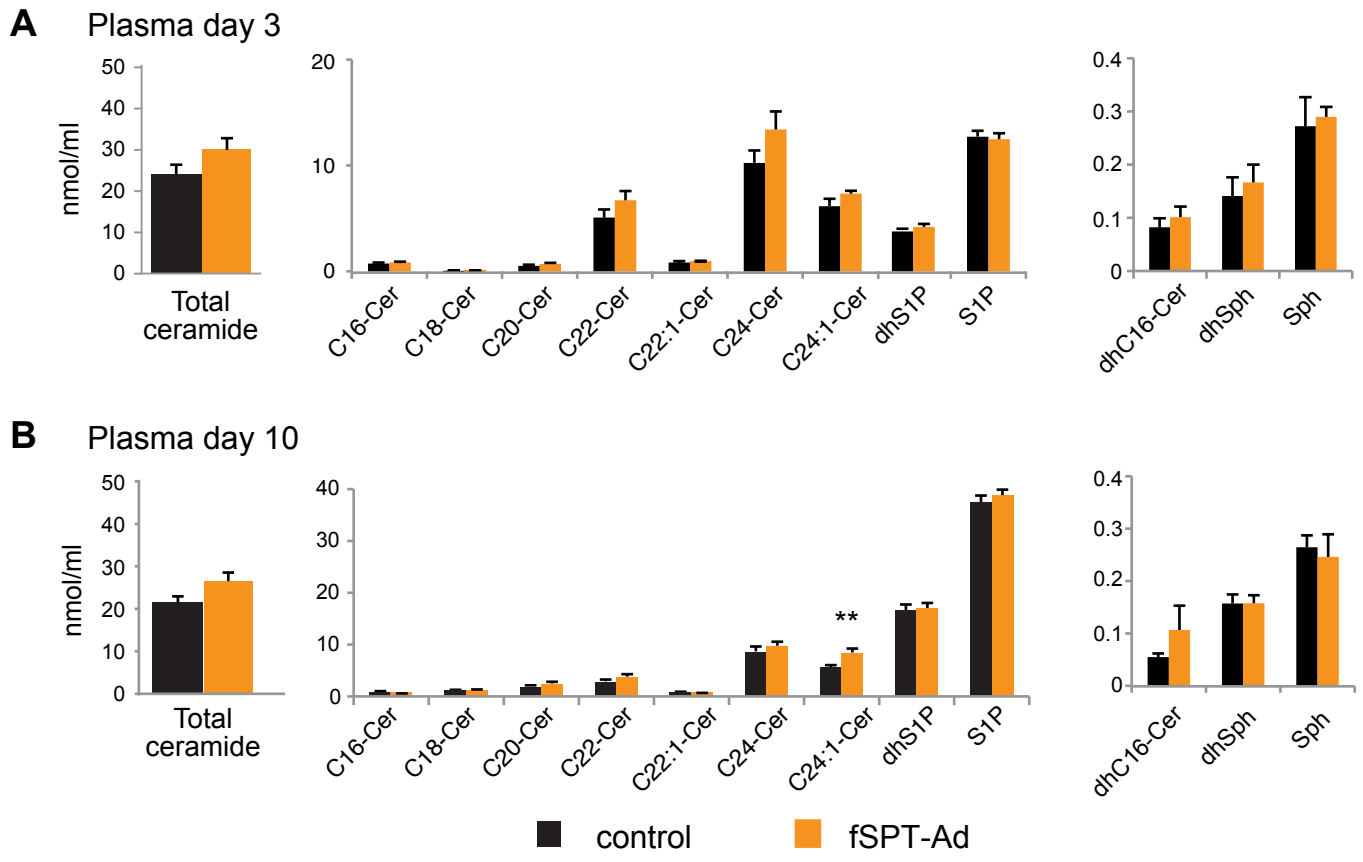
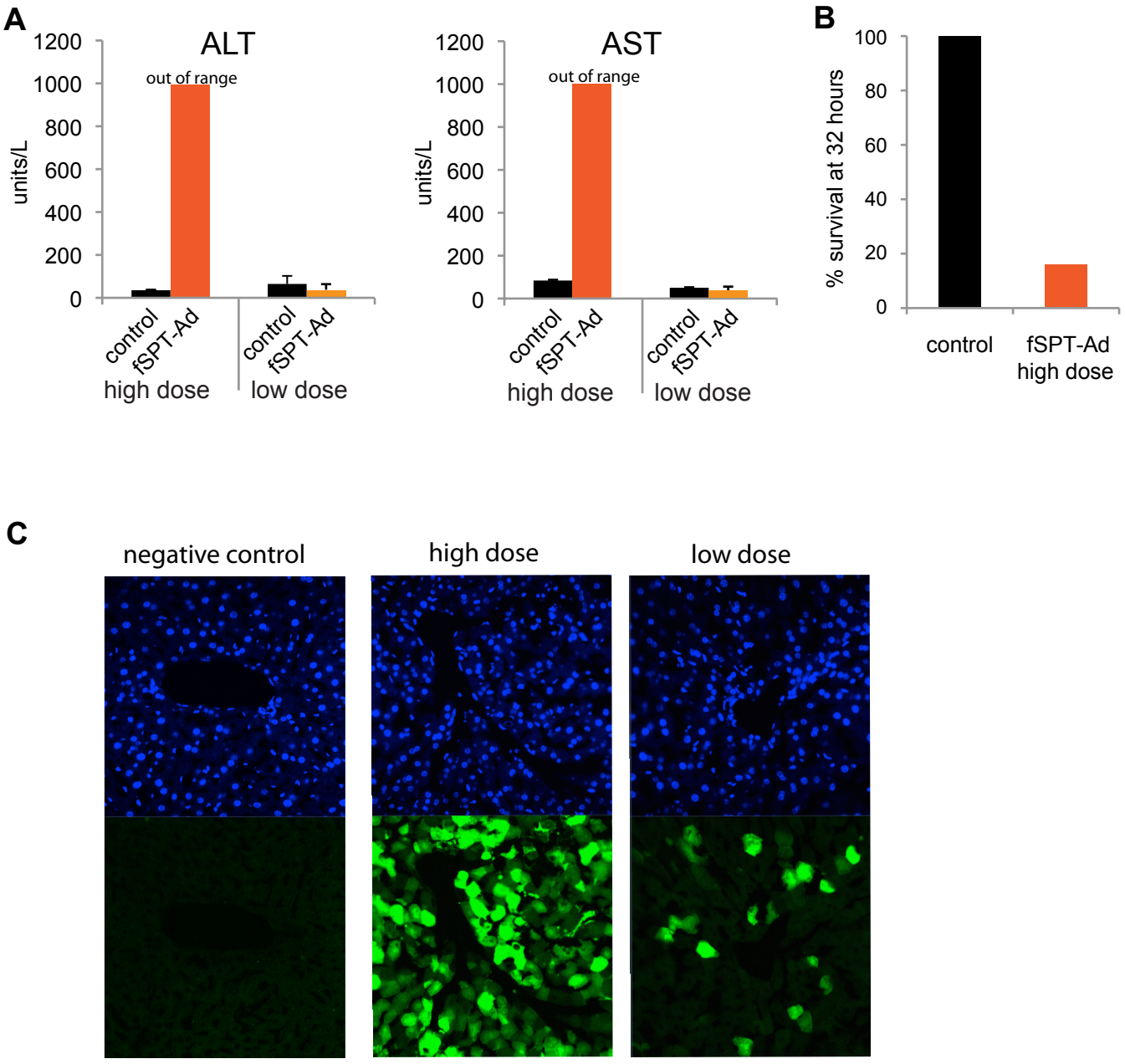


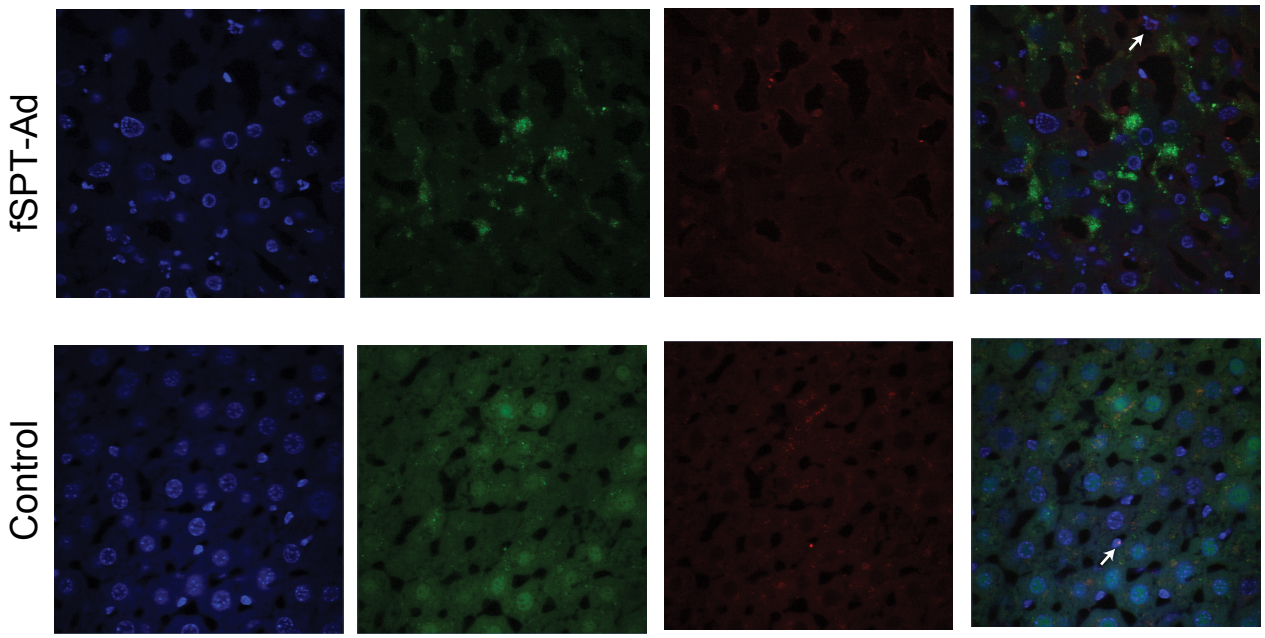
Supplemental Figure 1. Sphingolipid levels and SPT regulation in the liver of Atg7LKO mice. Liver homogenates from Atg7LKO and control (Atg7lox/lox) mice were used to measure sphingolipid concentration (A) and for immunoblotting, with quantitation of the bands (B). Microsomal membranes were isolated and used to perform SPT assays (C). RNA was isolated and used for quantitative PCR analysis (D). Data for individual ceramide species, protein expression, SPT activity, and mRNA expression are presented as mean (±SEM) (n=5, *p <0.05, **p < 0.01, ***p < 0.001).



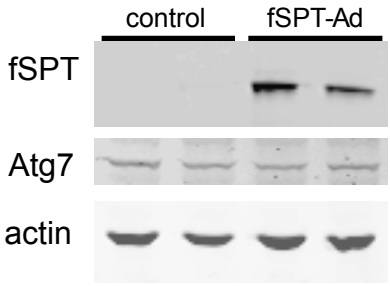
Supplemental Figure 2. Sphingolipid levels in plasma following low-dose fSPT-adenovirus administration. Mice were injected with the low dose of fSPT-adenovirus (fSPT-Ad) or null-adenovirus (control), and blood was collected on day 3 (A) and day 10 (B). Concentrations are shown in plasma. Data for individual ceramide species are presented as mean (±SEM) (n=7, **p < 0.01).



Supplemental Figure 3. Toxic effects of high-dose fSPT-adenovirus administration. Mice were injected with the high dose or low dose of fSPT-adenovirus (fSPT-Ad) or Mut-fSPT-adenovirus (control). Blood was collected 24 hr (high dose) or 3 days (low dose) after injection. Serum was tested for ALT and AST levels. Data are presented as mean (±SEM) (n=3) (A). Mouse survival at 32 hr (n=6) (B). Extent of hepatocyte infection following administration of high dose and low dose of fSPT-GFP-adenovirus. Livers were perfused with 4% paraformaldehyde and harvested 24 hr (high dose) and 3 days (low dose) after injection. Negative control is from an uninjected mouse (C).



Supplemental Figure 4. TUNEL staining in GFP-LC3+/+ mice following high-dose fSPT-adenovirus administration. GFP-LC3+/+ mice were injected with a high dose of fSPT-adenovirus (fSTP-Ad) or Mut-fSPT-adenovirus (control). Livers were perfused with 4% paraformaldehyde and harvested 24 hr after injection, then TUNEL assays performed. White arrows point to apoptosis events that were observed very rarely in both control- and fSPT-Ad-injected mice.



Supplemental Figure 5. Mice were injected with the high dose of fSPT-adenovirus (fSPT-Ad) or control (null-adenovirus), livers were harvested at 24 hr. Liver homogenates were used for immunoblotting using antibodies noted in the figure.