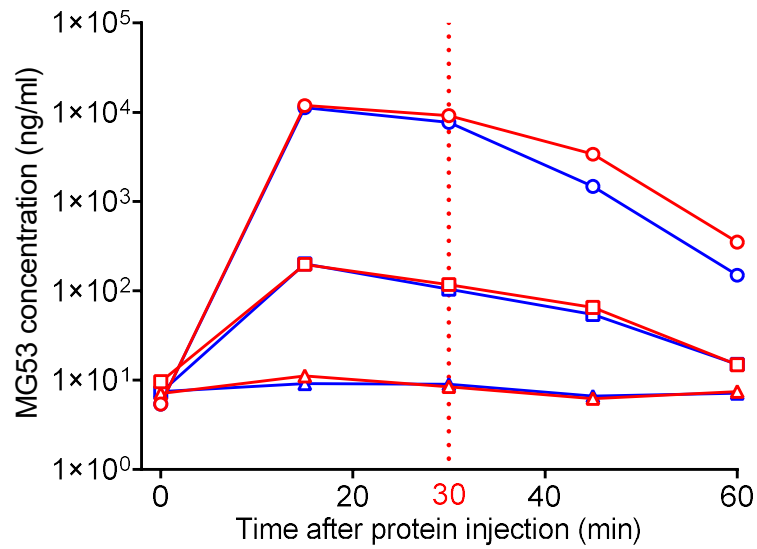
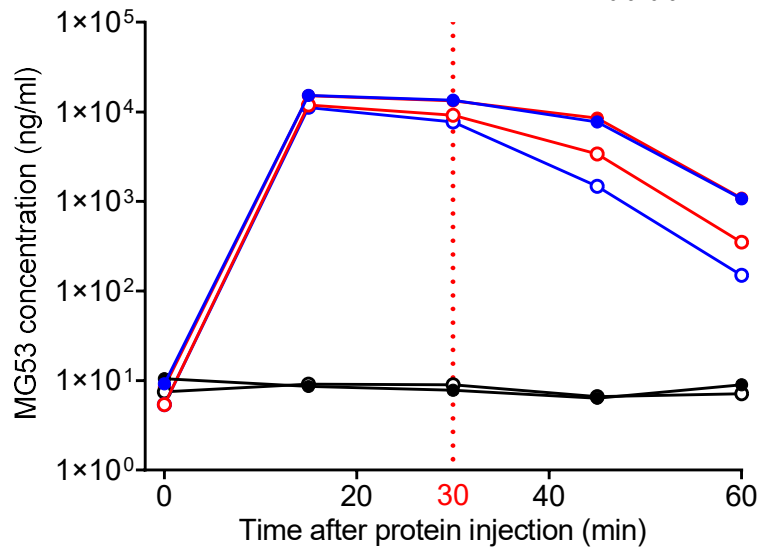


- A**
- rhMG53-WT 0 ng/kg
  - rhMG53-WT  $1 \times 10^4$  ng/kg
  - rhMG53-WT  $1 \times 10^6$  ng/kg
  - rhMG53-C14A 0 ng/kg
  - rhMG53-C14A  $1 \times 10^4$  ng/kg
  - rhMG53-C14A  $1 \times 10^6$  ng/kg

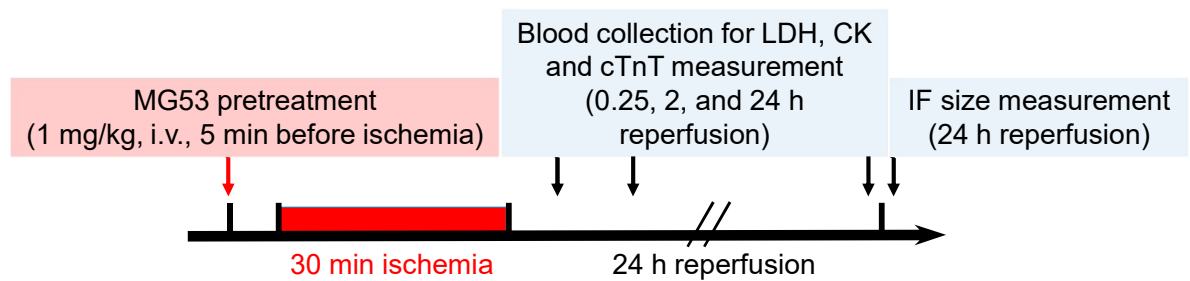


- B**
- $db/+$  +BSA
  - $db/+$  +rhMG53-WT
  - $db/+$  +rh-MG53-C14A
  - $db/db$  +BSA
  - $db/db$  +rhMG53-WT
  - $db/db$  +rh-MG53-C14A

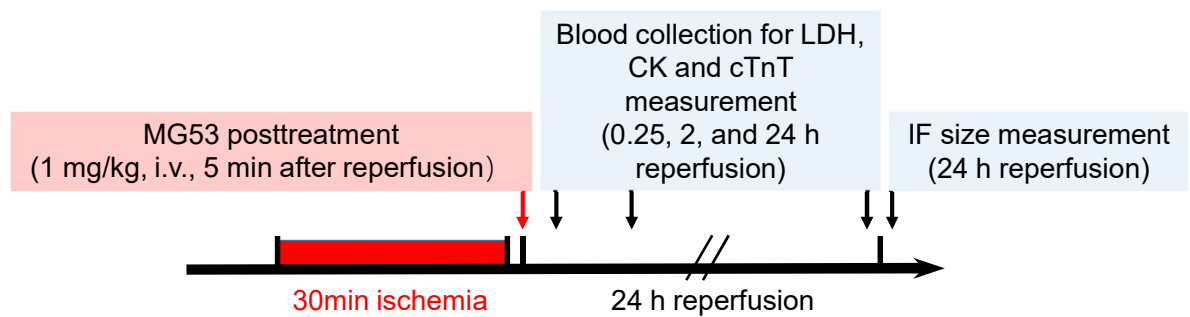


Supplementary Figure 1

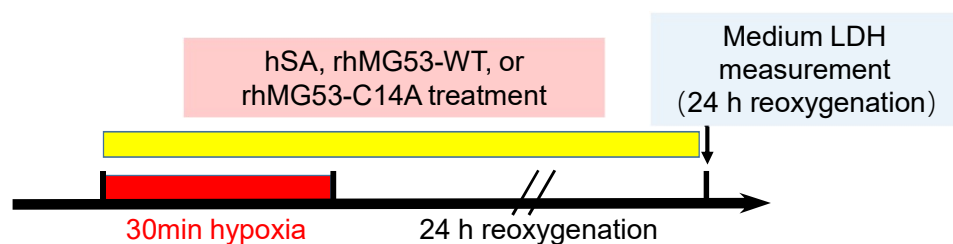
**A** Pretreatment (10-week mice)



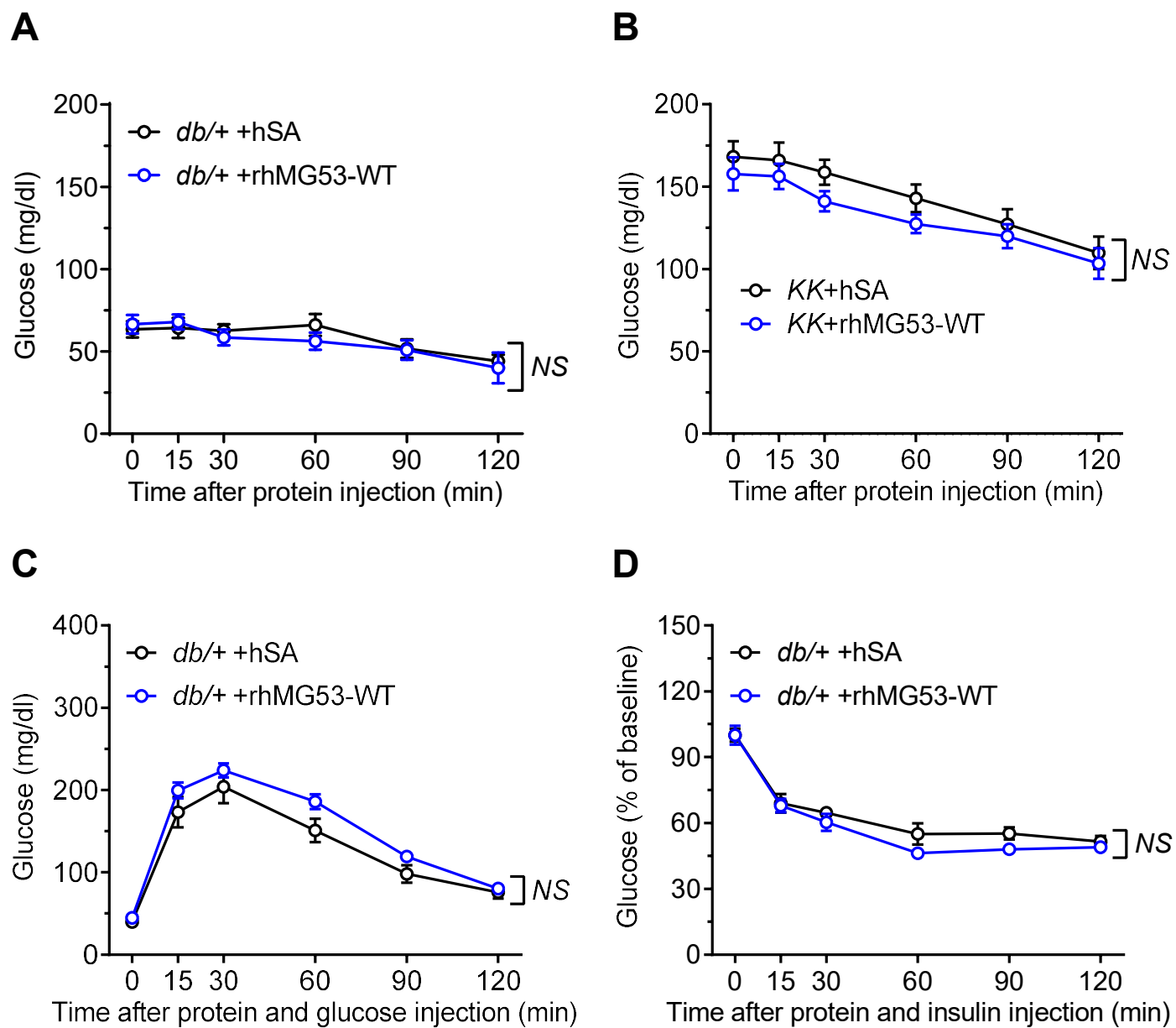
**B** Post-treatment (10-week mice)



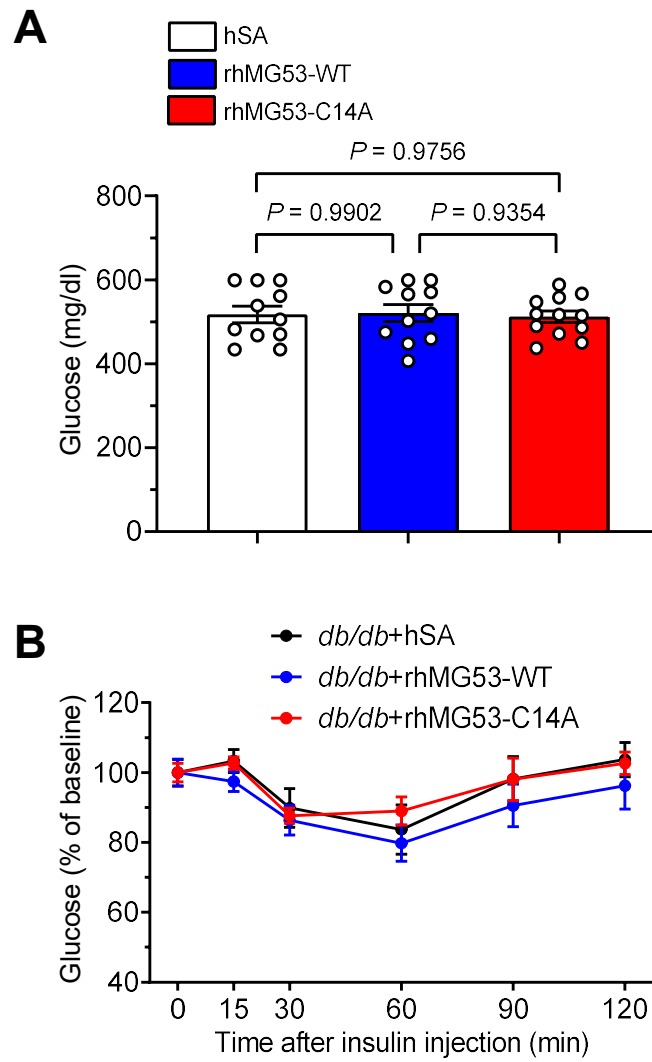
**C** Cultured cardiomyocyte H/R



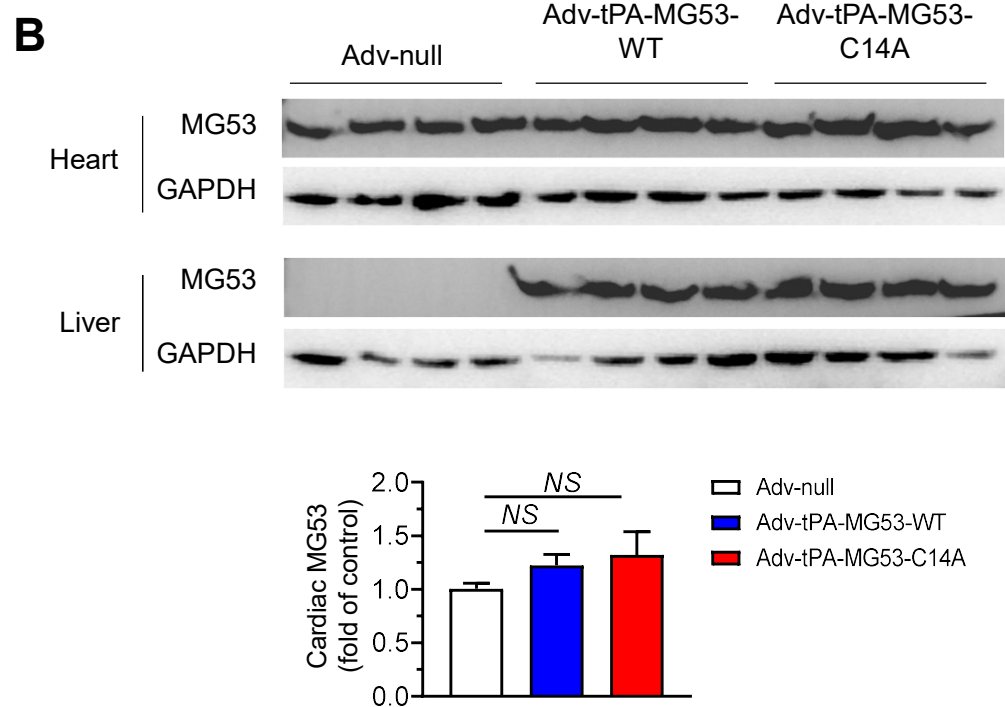
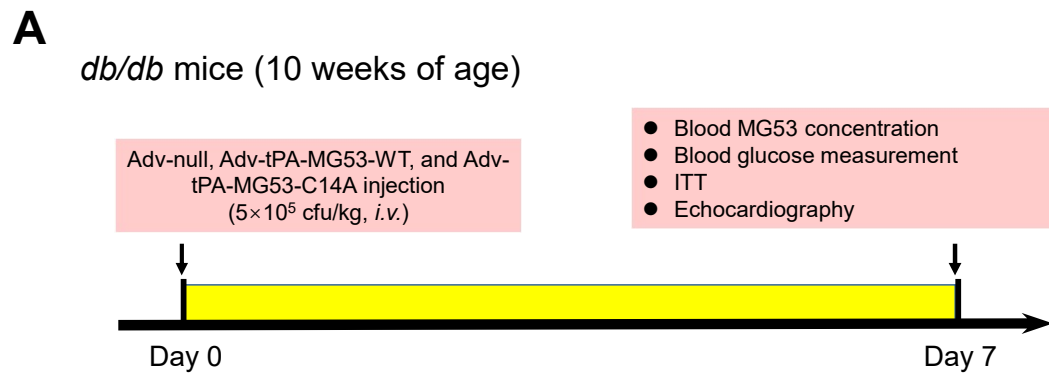
**Supplementary Figure 2**



**Supplementary Figure 3**



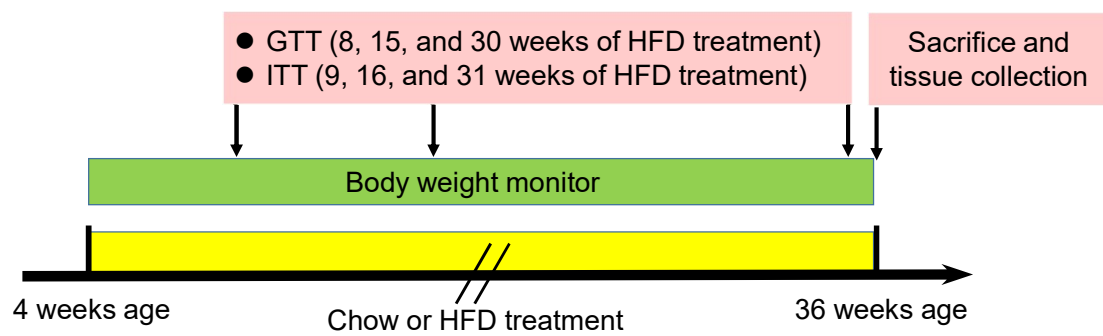
Supplementary Figure 4



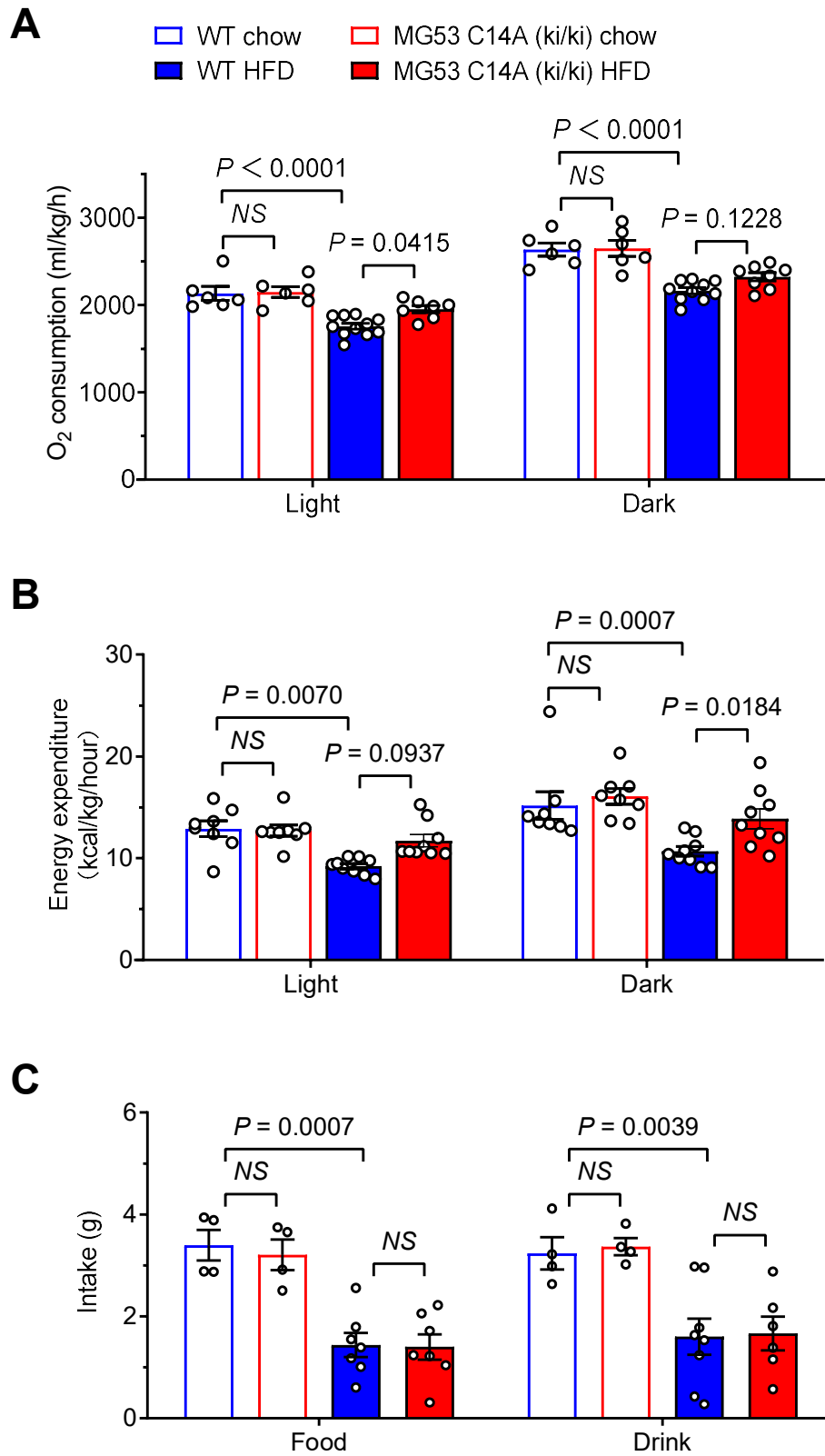
**Supplementary Figure 5**

WT mice

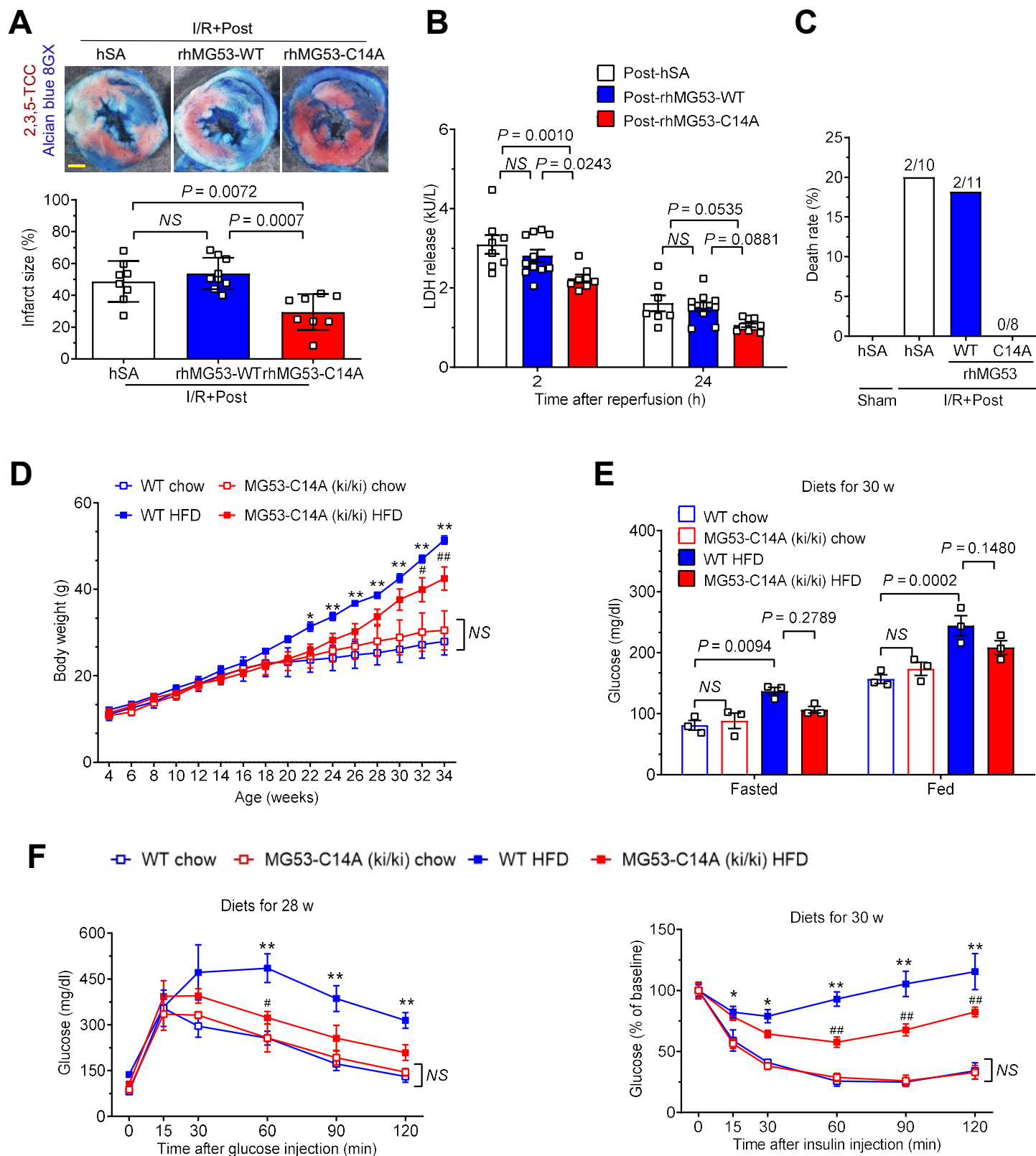
MG53-C14A (ki/ki) mice



**Supplementary Figure 6**



Supplementary Figure 7



**Supplementary Figure 8**