Supplementary Materials

Supplemental Table 1. Statistical methods used for each experimental condition

Supplemental Figure 1. Body weight during the experimental period

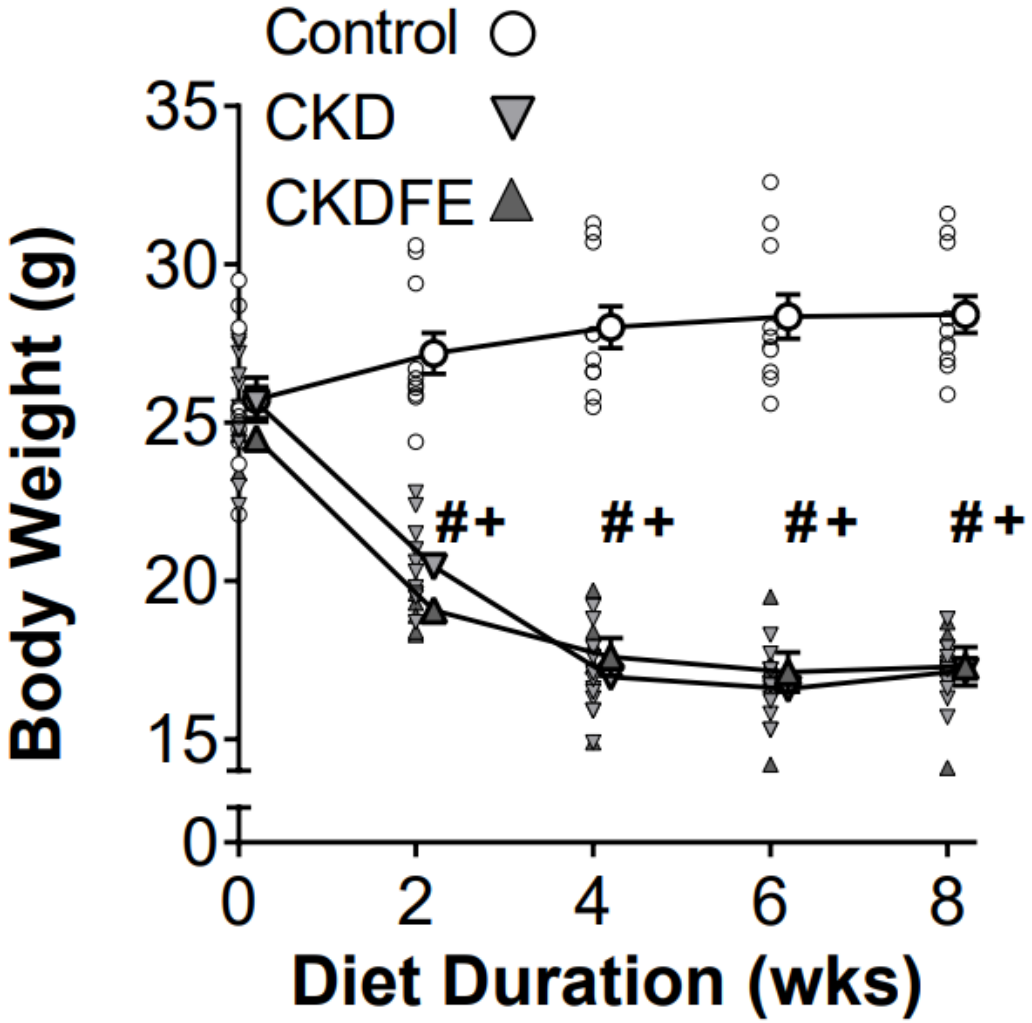
Supplemental Figure 2. Single skeletal muscle fiber force and cross-sectional area (CSA) for control, CKD and CKDFE groups by fiber type and representative gels

Supplemental Figure 3. Assessment of apoptosis in skeletal muscle in three groups of mice

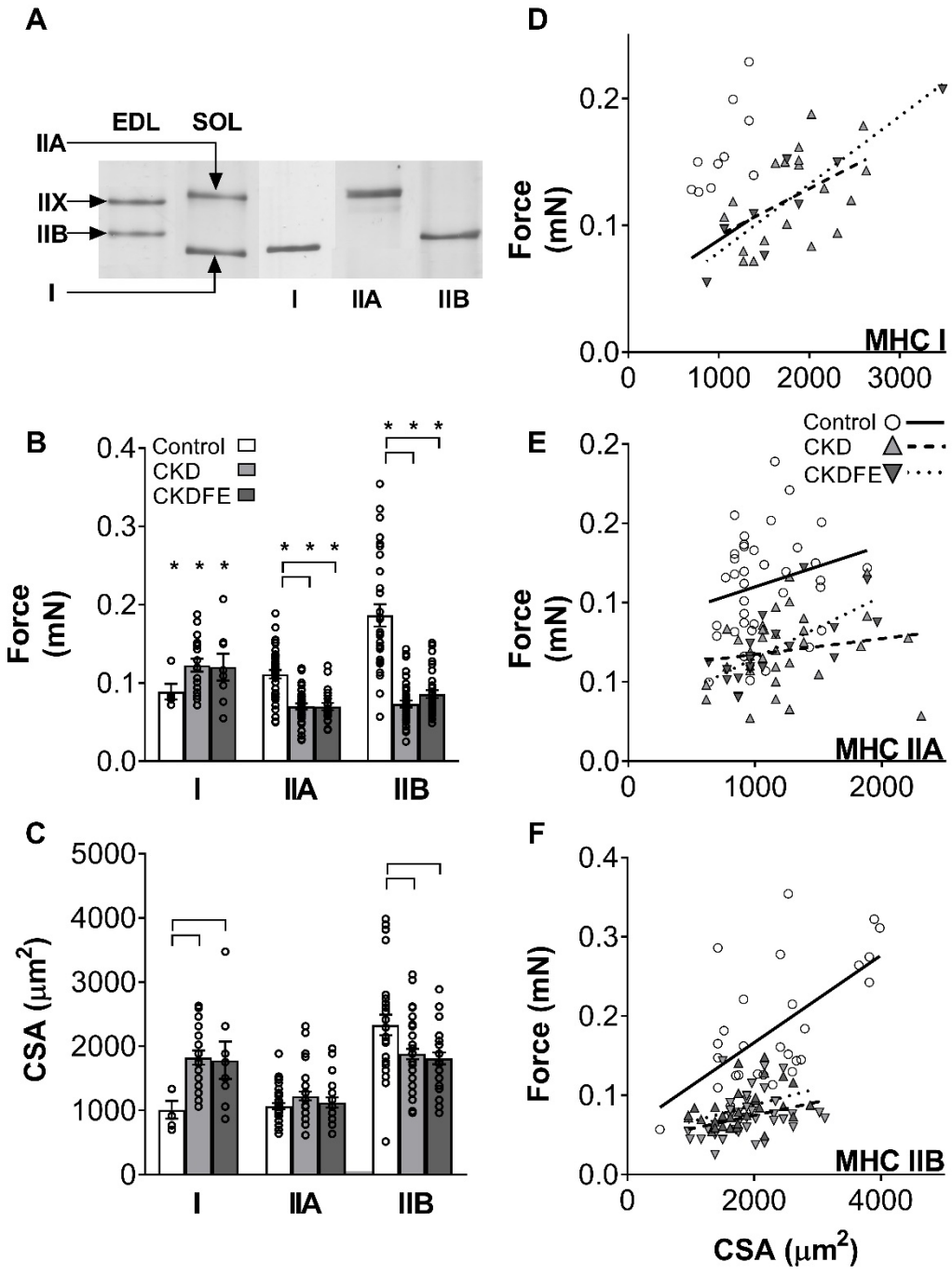
Supplementary Table 1. Statistical methods used for each experimental condition

Statistical Analysis	Purpose	Unit of Analysis
3X3 Linear Mixed Model Factorial ANOVA	Examine interactions and main effects (mouse condition X fiber condition) for cellular and molecular parameters	Individual fibers, accounting for repeat measurements within mice
Linear Regression	Relationships between force and CSA	Individual fibers
	Relationships between specific tension, *B*, and cross-bridge kinetics with hemoglobin	Individual mice
ANCOVA	Examine mean differences between slopes and intercepts from linear regression	Individual fibers
Linear Mixed Model ANOVA	Examine differences in calcium sensitivity and specific tension-pCa experiments utilizing Bonferroni post-hoc tests for mean differences	Individual fibers, accounting for repeat measurements within mice
	Determine significance of the differences in physical parameters, kidney function and hemoglobin between experimental groups utilizing Bonferroni post-hoc tests for mean differences	Individual fibers, accounting for repeat measurements within mice
	Examine mean differences for passive stiffness experiments, rigor experiments, and relative changes from maximal Ca^{2+}-activation to fatigue	Individual fibers, accounting for repeat measurements within mice

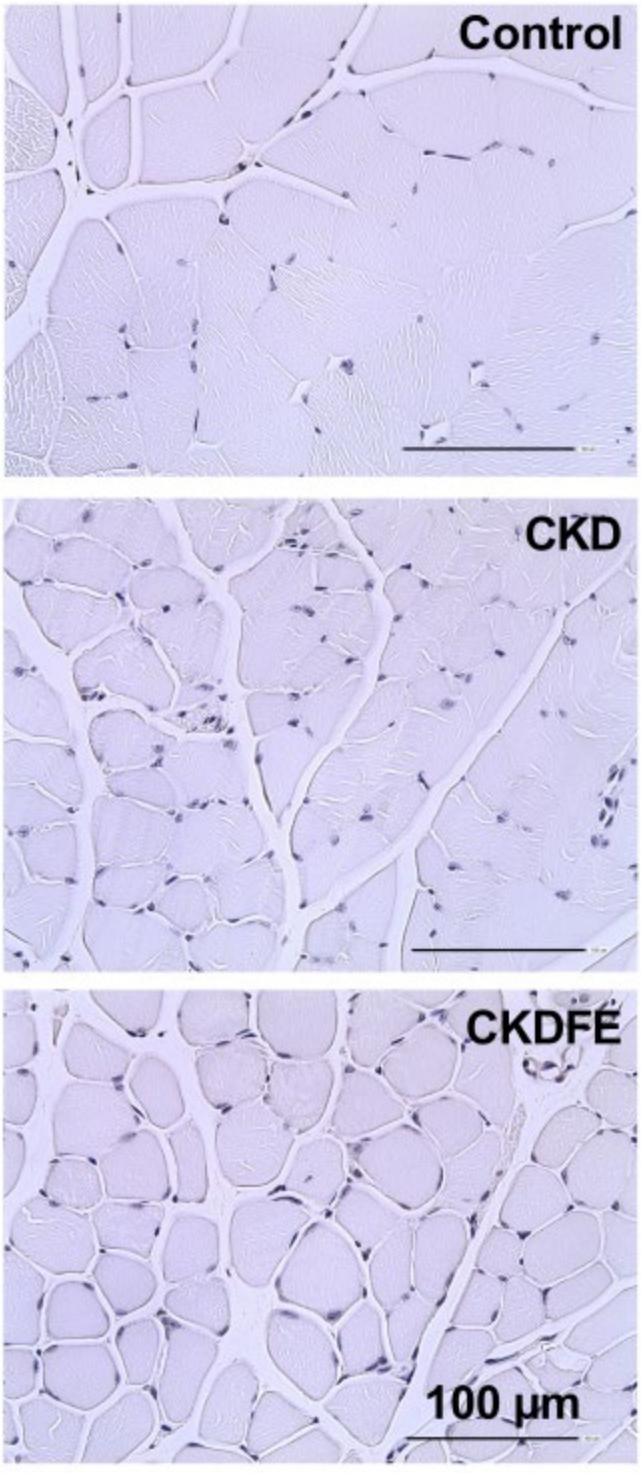
CSA = Cross-sectional area



Supplemental Figure 1



Supplemental Figure 2



Supplemental Figure 3

Supplemental Figure 1. Body weight during the experimental period. Mice were started on control diet or 0.2% adenine diet at 8 weeks of age and euthanized at 16 weeks of age. + = significant difference ($p < 0.05$) within each group from initial body weight at time zero (8 weeks of age), # = significant difference between CKD and CKDFE versus control at each time point. Number of mice in each group for control/CKD/CKDFE were 10/12/6.

Supplemental Figure 2. Single skeletal muscle fiber force and cross-sectional area (CSA) for control, CKD and CKDFE groups by fiber type and representative gels. Mean ± SE with individual datapoints overlaid on-top of bars for fatiguing conditions (pH = 6.2, P_i = 30 mM). Horizontal bars = significant difference ($p < 0.05$) between groups within fiber type, * = significant difference compared to maximal activating condition within group. *Right (D-F)*: Scatterplots, with each point representing an individual fiber. Lines indicate linear regressions, with Pearson's correlation coefficients for Panel C (Control: $r = 0.64$, $p = 0.24$, CKD: $r = 0.49$, $p = 0.035$, and CKDFE: $r = 0.91$, $p = 0.001$), D (Control: $r = 0.22$, $p = 0.18$, CKD: $r = 0.18$, $p = 0.30$, and CKDFE: $r = 0.68$, $p = 0.001$), and E (Control: $r = 0.63$, $p < 0.001$, CKD: $r = 0.32$, $p = 0.049$, and CKDFE: $r = 0.42$, $p = 0.02$). Number of mice in each group for control/CKD/CKDFE were 3/3/3.

Supplemental Figure 3. Assessment of apoptosis in skeletal muscle in three groups of mice. Terminal deoxynucleotidyl transferase dUTP nick end labeling (TUNEL) staining of gastrocnemius muscle for control, CKD, and CKDFE groups was negative. Representative images are shown; images from n = 3 mice per group were reviewed.