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Supplemental Information

TnI Structural Interface with the N-Terminal Lobe of TnC as a Determinant of Cardiac Contractility

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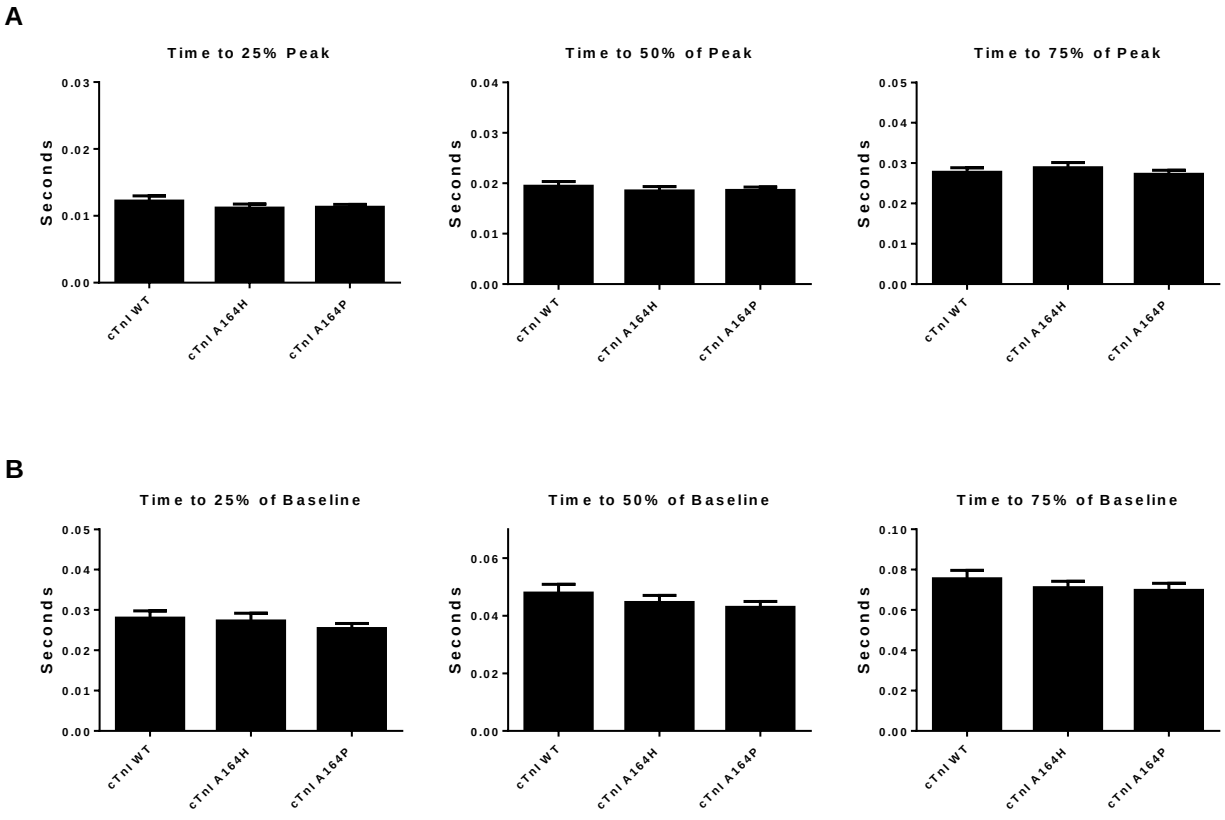
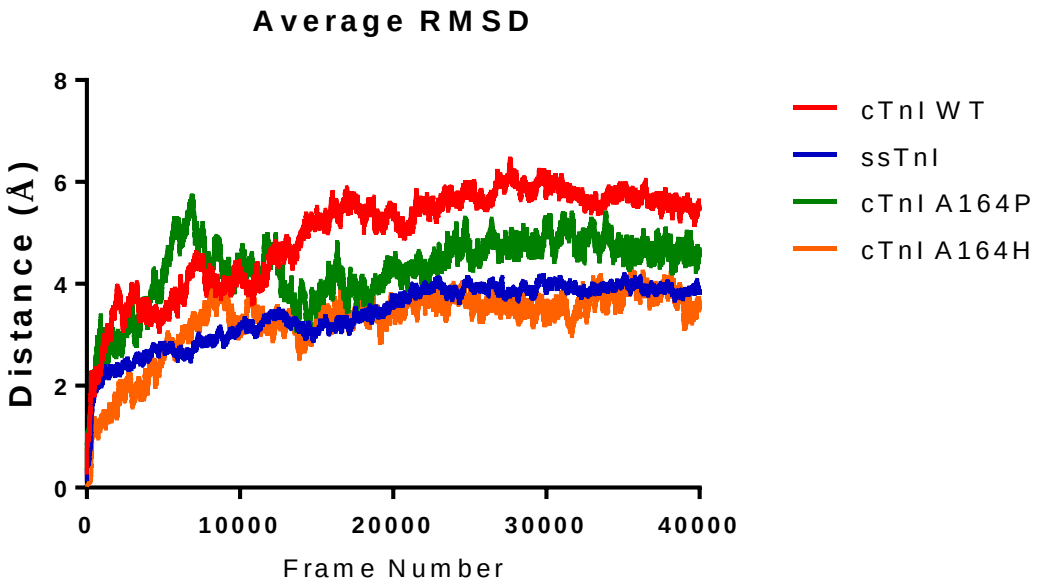


Supplemental Figure 1. Sarcomere length kinetics at physiologic baseline. (*A*) Time to reach various percentages of peak contractile amplitude as measured from baseline sarcomere length. (B) Time to reach various percentages of return to baseline sarcomere length as measured from the peak of the contractile amplitude. *n* = 37-55 myocytes from four independent experiments for each group. N.S. from one-way analysis of variance with Tukey's post-hoc test. Mean ± S.E.M. are presented.

cTnI WT	**pK_a^{int}**
His-173	6.62
cTnI A164H	**pK_a^{int}**
His-164	6.54
His-173	6.74
cTnI A164P	**pK_a^{int}**
His-173	6.9
ssTnI	**pK_a^{int}**
His-132	5.7

Supplemental Figure 2. Theoretical intrinsic pK_a values of troponin I histidine residues across various simulations as determined using the Poisson-Boltzmann implicit solvent model available via the H++ server.



Supplemental Figure 3. Average RMSD over 40ns for each TnI isoforom.