

Supplementary Table 9. Statistics: Pairwise Comparisons of Phasic mechanical properties of TTX-Sensitive and -Resistant Skeletal Muscles from *Thamnophis sirtalis* and *Thamnophis atratus* (pertaining to Figures 3 and Supp. Fig. 4).

Dunn's Multiple Pairwise Comparison: Whole Cell Electrophysiology						
Variable:	Baseline Force (N g ⁻¹) by Genotype					
Comparison	WTa - WTs	LVNV - WTs	LVNV - WTa	EPN - WTs	EPN - WTa	EPN - LVNV
Z	9.2001	0.281	-7.3837	-0.8232	-8.2033	-0.9494
P.unadj	3.58 x 10 ⁻²⁰	0.7787	1.54 x 10 ⁻¹³	0.4104	2.34 x 10 ⁻¹⁶	0.3424
P.adj	2.15 x 10 ⁻¹⁹	0.7787	6.16 x 10 ⁻¹³	0.8208	1.17 x 10 ⁻¹⁵	1
Observations (N,n)	(16,64) - (23,92)	(11,44) - (23,92)	(11,44) - (16,64)	(10,40) - (23,92)	(10,40) - (16,64)	(10,40) - (11,44)
Variable:	F _{max} (N g ⁻¹) by Genotype					
Comparison	WTa - WTs	LVNV - WTs	LVNV - WTa	EPN - WTs	EPN - WTa	EPN - LVNV
Z	1.204	-8.358	-8.823	-4.7751	-5.4589	2.8728
P.unadj	0.2288	6.38 x 10 ⁻¹⁷	1.11 x 10 ⁻¹⁸	1.8 x 10 ⁻⁶	4.8 x 10 ⁻⁸	0.0041
P.adj	0.2288	3.19 x 10 ⁻¹⁶	6.68 x 10 ⁻¹⁸	5.39 x 10 ⁻⁶	1.92 x 10 ⁻⁷	0.0081
Observations (N,n)	(16,64) - (23,92)	(11,44) - (23,92)	(11,44) - (16,64)	(10,40) - (23,92)	(10,40) - (16,64)	(10,40) - (11,44)
Variable:	Time to 10% F _{max} (s) by Genotype					
Comparison	WTa - WTs	LVNV - WTs	LVNV - WTa	EPN - WTs	EPN - WTa	EPN - LVNV
Z	6.8136	4.3741	-1.5692	2.7744	-2.8955	-1.2647
P.unadj	9.52 x 10 ⁻¹²	1.22 x 10 ⁻⁵	0.1166	0.0055	0.0038	0.206
P.adj	5.71 x 10 ⁻¹¹	6.1 x 10 ⁻⁵	0.2332	0.0166	0.0151	0.206
Observations (N,n)	(16,64) - (23,92)	(11,44) - (23,92)	(11,44) - (16,64)	(10,40) - (23,92)	(10,40) - (16,64)	(10,40) - (11,44)
Variable:	Time to F _{max} (s) by Genotype					
Comparison	WTa - WTs	LVNV - WTs	LVNV - WTa	EPN - WTs	EPN - WTa	EPN - LVNV
Z	5.134	3.1614	-1.3083	-0.7812	-4.8802	-3.33
P.unadj	2.34 x 10 ⁻⁷	0.0016	0.1908	0.4347	1.06 x 10 ⁻⁶	0.0009
P.adj	1.7 x 10 ⁻⁶	0.0047	0.3815	0.4347	5.3 x 10 ⁻⁶	0.0035
Observations (N,n)	(16,64) - (23,92)	(11,44) - (23,92)	(11,44) - (16,64)	(10,40) - (23,92)	(10,40) - (16,64)	(10,40) - (11,44)
Variable:	Time to 50% F _{max} relaxation (s) by Genotype					
Comparison	WTa - WTs	LVNV - WTs	LVNV - WTa	EPN - WTs	EPN - WTa	EPN - LVNV
Z	6.0629	1.5034	-3.6321	-1.8299	-6.6157	-2.8477
P.unadj	1.34 x 10 ⁻⁹	0.1327	0.0003	0.0673	3.7 x 10 ⁻¹¹	0.0044
P.adj	6.68 x 10 ⁻⁹	0.1327	0.0011	0.1345	2.22 x 10 ⁻¹⁰	0.0132
Observations (N,n)	(16,64) - (23,92)	(11,44) - (23,92)	(11,44) - (16,64)	(10,40) - (23,92)	(10,40) - (16,64)	(10,40) - (11,44)
Variable:	Contraction Duration from 10% maximal contraction to 50% post-maximal relaxation (s) by Genotype					
Comparison	WTa - WTs	LVNV - WTs	LVNV - WTa	EPN - WTs	EPN - WTa	EPN - LVNV
Z	5.2261	0.2288	-4.1296	-2.8344	-6.8838	-2.6492
P.unadj	1.73 x 10 ⁻⁷	0.819	3.63 x 10 ⁻⁵	0.0046	5.83 x 10 ⁻¹²	0.0081
P.adj	8.66 x 10 ⁻⁷	0.819	0.0001	0.0138	3.5 x 10 ⁻¹¹	0.0161
Observations (N,n)	(16,64) - (23,92)	(11,44) - (23,92)	(11,44) - (16,64)	(10,40) - (23,92)	(10,40) - (16,64)	(10,40) - (11,44)
Phasic continued.						
Variable:	dFdt _{max} (N g ⁻¹ s ⁻¹) by Genotype					
Comparison	WTa - WTs	LVNV - WTs	LVNV - WTa	EPN - WTs	EPN - WTa	EPN - LVNV
Z	1.3333	-7.9934	-8.5897	-4.4751	-5.2818	2.827
P.unadj	0.1824	1.31 x 10 ⁻¹⁵	8.72 x 10 ⁻¹⁸	7.64 x 10 ⁻⁶	1.28 x 10 ⁻⁷	0.0047
P.adj	0.1824	6.56 x 10 ⁻¹⁵	5.23 x 10 ⁻¹⁷	2.29 x 10 ⁻⁵	5.12 x 10 ⁻⁷	0.0094
Observations (N,n)	(16,64) - (23,92)	(11,44) - (23,92)	(11,44) - (16,64)	(10,40) - (23,92)	(10,40) - (16,64)	(10,40) - (11,44)
Variable:	dFdt _{min} (N g ⁻¹ s ⁻¹) by Genotype					
Comparison	WTa - WTs	LVNV - WTs	LVNV - WTa	EPN - WTs	EPN - WTa	EPN - LVNV
Z	-0.8301	6.07	6.3712	3.2912	3.763	-2.24
P.unadj	0.4064	1.28 x 10 ⁻⁹	1.88 x 10 ⁻¹⁰	0.001	0.0002	0.0251
P.adj	0.4064	6.4 x 10 ⁻⁹	1.13 x 10 ⁻⁹	0.003	0.0007	0.0502
Observations (N,n)	(16,64) - (23,92)	(11,44) - (23,92)	(11,44) - (16,64)	(10,40) - (23,92)	(10,40) - (16,64)	(10,40) - (11,44)
Variable:	Time to dFdt _{max} (s) by Genotype					
Comparison	WTa - WTs	LVNV - WTs	LVNV - WTa	EPN - WTs	EPN - WTa	EPN - LVNV
Z	-1.384	5.4244	6.2272	1.4863	2.5143	-3.2626
P.unadj	0.1664	5.82 x 10 ⁻⁸	4.75 x 10 ⁻¹⁰	0.1372	0.0119	0.0011
P.adj	0.1664	2.91 x 10 ⁻⁷	2.85 x 10 ⁻⁹	0.2744	0.0359	0.0044
Observations (N,n)	(16,64) - (23,92)	(11,44) - (23,92)	(11,44) - (16,64)	(10,40) - (23,92)	(10,40) - (16,64)	(10,40) - (11,44)
Variable:	Time to dFdt _{min} (s) by Genotype					
Comparison	WTa - WTs	LVNV - WTs	LVNV - WTa	EPN - WTs	EPN - WTa	EPN - LVNV
Z	4.346	-0.9053	-4.1752	-2.4015	-5.7613	-1.153
P.unadj	1.39 x 10 ⁻⁵	0.3653	2.98 x 10 ⁻⁵	0.0163	8.35 x 10 ⁻⁹	0.249
P.adj	6.93 x 10 ⁻⁵	0.3653	0.0001	0.049	5.01 x 10 ⁻⁸	0.4978
Observations (N,n)	(16,64) - (23,92)	(11,44) - (23,92)	(11,44) - (16,64)	(10,40) - (23,92)	(10,40) - (16,64)	(10,40) - (11,44)
Variable:	Contaction Duration from dFdt _{max} to dFdt _{min} (s) by Genotype					
Comparison	WTa - WTs	LVNV - WTs	LVNV - WTa	EPN - WTs	EPN - WTa	EPN - LVNV
Z	4.6294	-2.184	-5.8919	-2.5327	-6.1184	-0.3633
P.unadj	3.67 x 10 ⁻⁶	0.029	3.82 x 10 ⁻⁹	0.0113	9.45 x 10 ⁻¹⁰	0.7164
P.adj	1.47 x 10 ⁻⁵	0.0579	1.91 x 10 ⁻⁸	0.034	5.67 x 10 ⁻⁹	0.7164
Observations (N,n)	(16,64) - (23,92)	(11,44) - (23,92)	(11,44) - (16,64)	(10,40) - (23,92)	(10,40) - (16,64)	(10,40) - (11,44)
Definitions:						
Baseline Force (N g ⁻¹)				Optimal baseline tension on the muscles in Newtons/gram-tissue		
F _{max} (N g ⁻¹)				Maimum force produced by each phasic contraction in Newtons/gram		
Time to 10% F _{max} (s)				Time to develop 10% of maximal force from stimulus onset (seconds)		
Time to F _{max} (s)				Time required to achieve maximal force (in seconds)		
Time to 50% F _{max} relaxation (s)				Time required to half-maximally relax from stimulus onset (seconds)		
Contraction Duration from 10% maximal contraction to 50% post-maximal relaxation (s)				(Time to 50% relaxation) - (Time to 10% contraction) (seconds)		
dFdt _{max} (N g ⁻¹ s ⁻¹)				Positive peak of first derivative (in Newtons/gram-tissue per second)		
dFdt _{min} (N g ⁻¹ s ⁻¹)				Negative peak of first derivative (in Newtons/gram-tissue per second)		
Time to dFdt _{max} (s)				Time from stimulus onset to peak rate of force development (seconds)		
Time to dFdt _{min} (s)				Time from stimulus onset to peak rate of force relaxation (seconds)		
Contraction Duration from dFdt _{max} to dFdt _{min} (s)				(Time to dFdtmin) - (Time to dFdtmax) (seconds)		

*Note: WTa = Ancestral *Thamnophis atratus*, EPN = TTX resistant *Thamnophis atratus*; WTs = Ancestral *Thamnophis sirtalis*, LVNV = TTX resistant *Thamnophis sirtalis*

**Note: Shaded values represent adjusted p-values that fall below a predetermined significance level ($\alpha=0.05$)