

SUPPLEMENTARY FIGURE LEGENDS

Figure S1: Histopathology in FSHD-like mice.

Photomicrographs of tibialis anterior muscle in each group of mice: ACTA1-MCM/+ with TMX (control), ACTA1-MCM, FLExD/+ no TMX (mild) and ACTA1-MCM, FLExD/+ 7 days post-TMX (SD7). Hematoxylin and Eosin staining (a-c), DUX4 immunostaining co-localized with DAPI (d-f) or alone (g-i). Representative images are shown based on n=3-4 mice per group. White arrows indicate representative DUX4 positive myonuclei.

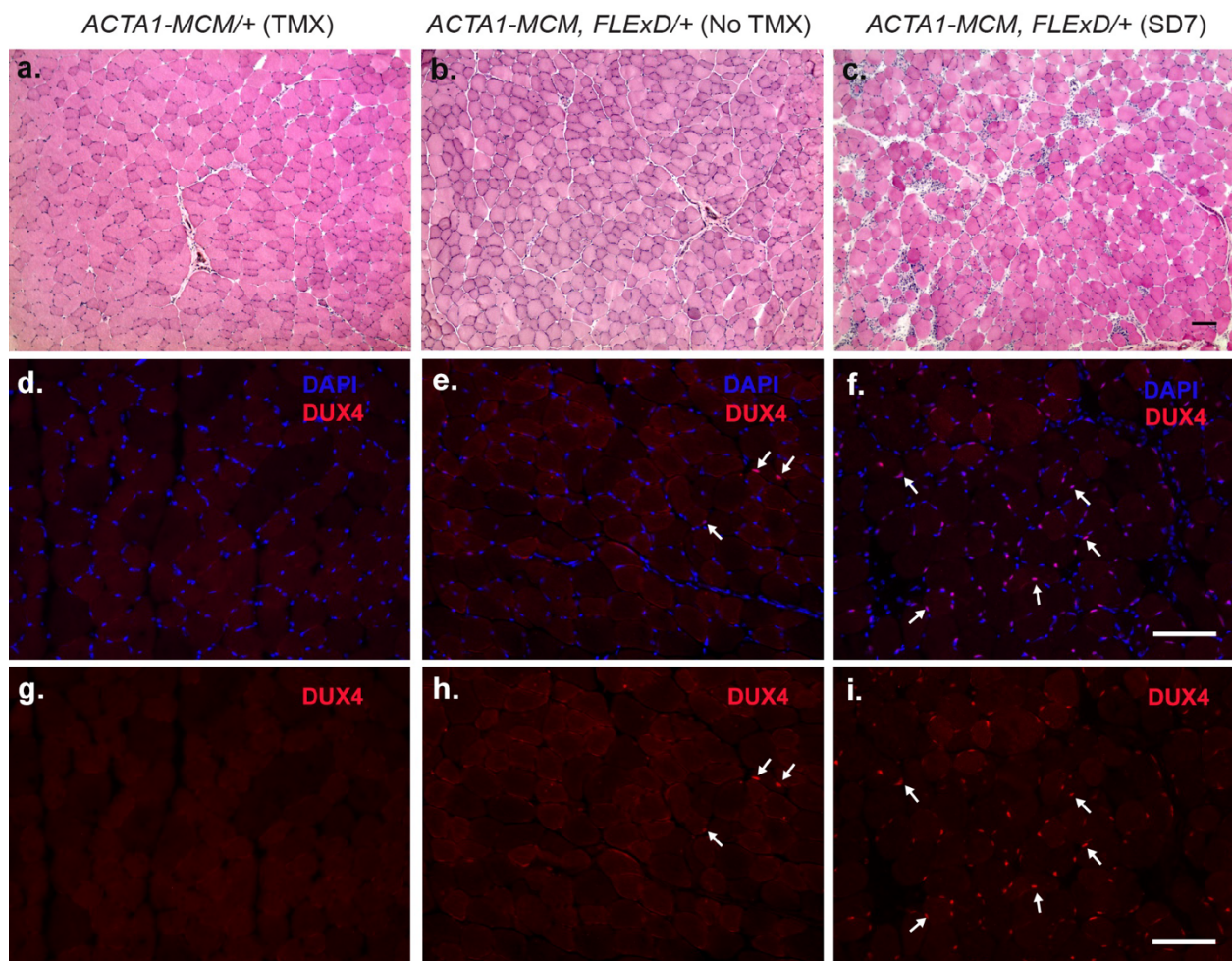
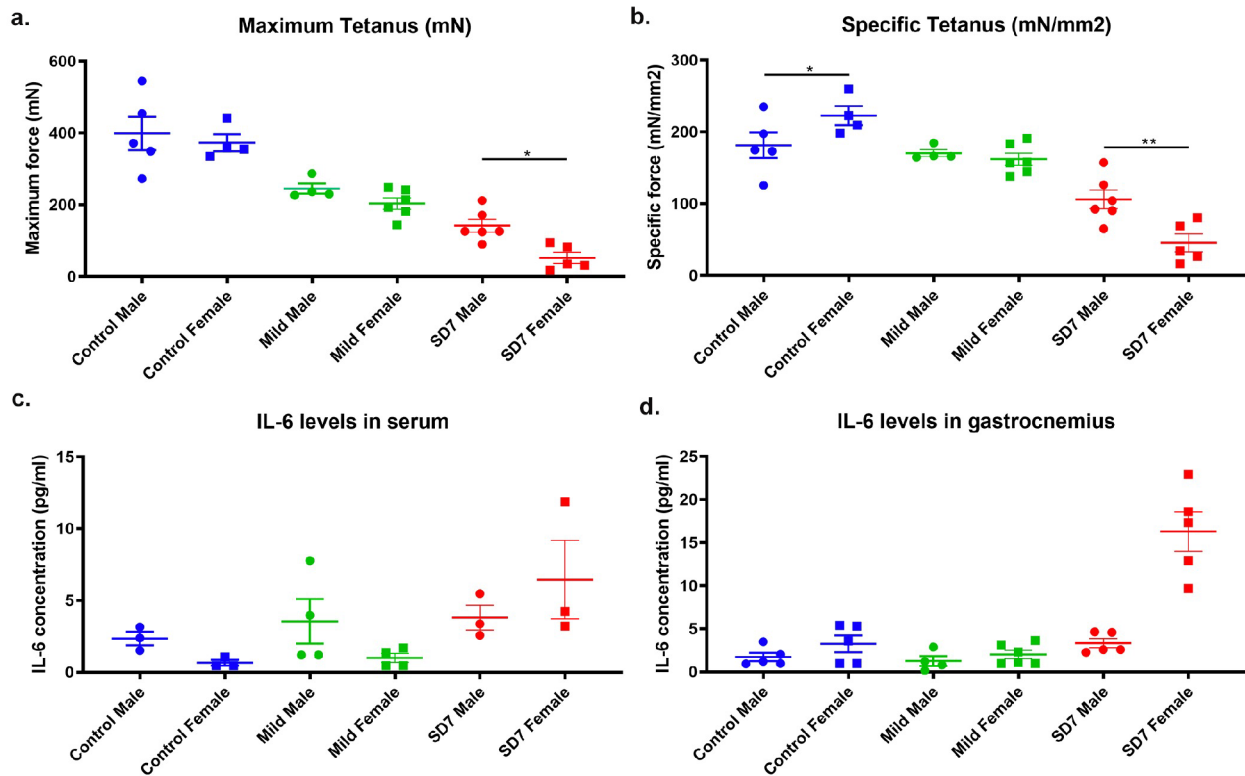


Figure S2: Analysis of male and female FSHD-like mice.

Male and female mice used in Figure 4 were assessed for maximum tetanus (a.), and cross-sectional muscle area normalized specific tetanus (b.) and analyzed separately by sex. IL-6 levels in the serum (c.) and gastrocnemius muscle (d.) in each group of mice: Control, blue (n=6 in serum, n=10 in muscle), Mild, green (n=8 in serum, n=10 in muscle) and SD7 (n=6 in serum, n=10 in muscle) were separated by sex. Significance: * p<0.05, ** p<0.01.



Supplementary Table 1: Correlations between serum cytokine levels and clinical scores.

Spearman's correlation coefficient (R) and False Discovery Rate (FDR) determination for the indicated cytokines and clinical scores in all patients, males and females.

MMT sum score						
	All		Males		Females	
	R	FDR	R	FDR	R	FDR
GM-CSF	0·00	1·00	-0·22	0·20	0·30	0·12
IFN-γ	-0·20	0·13	-0·17	0·34	-0·06	0·84
IL-5	0·03	0·94	0·01	1·00	0·03	0·99
IL-6	-0·38	2·97E-04	-0·46	2·72E-03	-0·33	0·10
IL-7	-0·07	0·70	-0·15	0·38	0·08	0·80
IL-8	-0·09	0·60	-0·23	0·20	0·01	0·99
IL-10	0·02	0·95	-0·29	0·12	0·24	0·23
IL-12p40	-0·21	0·1	-0·24	0·20	-0·12	0·68
IL-15	-0·03	0·94	-0·17	0·34	0·16	0·55
IL-16	-0·11	0·51	-0·23	0·20	-0·12	0·68
IL-17	-0·14	0·37	0·00	1·00	-0·15	0·56
TNF-α	-0·15	0·30	-0·25	0·20	-0·08	0·80
TNF-β	0·10	0·57	-0·03	1·00	0·32	0·10
VEGF	0·05	0·83	0·07	0·79	0·01	0·99

Brooke score						
	All		Males		Females	
	R	FDR	R	FDR	R	FDR
GM-CSF	0·06	0·70	0·27	0·16	-0·19	0·38
IFN-γ	0·10	0·50	0·15	0·39	0·02	0·95
IL-5	-0·05	0·71	0·05	0·83	-0·19	0·38
IL-6	0·31	6·82E-03	0·30	1·27E-01	0·32	0·12
IL-7	-0·07	0·70	0·09	0·60	-0·26	0·19
IL-8	0·14	0·30	0·21	0·31	0·09	0·73
IL-10	0·10	0·50	0·16	0·37	0·05	0·90
IL-12p40	0·26	0·03	0·28	0·14	0·23	0·28
IL-15	0·10	0·50	0·17	0·37	-0·02	0·95
IL-16	0·16	0·24	0·18	0·37	0·16	0·49
IL-17	0·02	0·93	-0·03	0·87	0·05	0·90
TNF-α	0·19	0·14	0·24	0·21	0·13	0·53
TNF-β	-0·03	0·86	0·16	0·37	-0·27	0·19
VEGF	-0·15	0·29	-0·16	0·37	-0·13	0·53

Vignos score						
	All		Males		Females	
	R	FDR	R	FDR	R	FDR
GM-CSF	-0.03	0.90	0.14	0.43	-0.23	0.46
IFN- γ	0.29	0.01	0.26	0.12	0.19	0.56
IL-5	0.00	1.00	0.04	0.83	-0.06	0.96
IL-6	0.47	3.29E-06	0.56	1.08E-04	0.38	0.03
IL-7	0.05	0.86	0.10	0.57	-0.04	0.96
IL-8	0.17	0.19	0.26	0.12	0.12	0.75
IL-10	0.03	0.90	0.29	0.10	-0.16	0.57
IL-12p40	0.18	0.19	0.23	0.17	0.07	0.96
IL-15	0.15	0.25	0.29	0.10	-0.05	0.96
IL-16	0.12	0.36	0.26	0.12	0.02	0.96
IL-17	0.16	0.20	0.07	0.72	0.19	0.56
TNF- α	0.25	0.04	0.31	0.09	0.17	0.57
TNF- β	0.02	0.96	0.14	0.43	-0.14	0.62
VEGF	-0.10	0.51	-0.19	0.25	0.02	0.96

CSS						
	All		Males		Females	
	R	FDR	R	FDR	R	FDR
GM-CSF	0.03	0.92	0.21	0.26	-0.18	0.60
IFN- γ	0.24	0.05	0.31	0.09	0.07	0.91
IL-5	0.03	0.92	0.08	0.66	0.00	1.00
IL-6	0.48	1.26E-06	0.59	2.19E-05	0.36	0.05
IL-7	0.09	0.65	0.14	0.50	-0.03	0.93
IL-8	0.09	0.65	0.17	0.38	0.04	0.92
IL-10	0.07	0.76	0.28	0.12	-0.09	0.85
IL-12p40	0.22	0.07	0.23	0.21	0.14	0.64
IL-15	0.05	0.81	0.12	0.56	-0.06	0.91
IL-16	0.08	0.67	0.17	0.38	0.05	0.91
IL-17	0.22	0.07	0.09	0.66	0.25	0.27
TNF- α	0.19	0.12	0.25	0.17	0.15	0.64
TNF- β	-0.01	1.00	0.07	0.72	-0.15	0.64
VEGF	0.00	1.00	-0.05	0.78	0.10	0.82

Age-corrected CSS						
	All		Males		Females	
	R	FDR	R	FDR	R	FDR
GM-CSF	0.08	0.62	0.20	0.29	-0.02	0.95
IFN-γ	0.07	0.64	0.29	0.11	-0.21	0.39
IL-5	-0.08	0.62	0.06	0.78	-0.21	0.39
IL-6	0.07	6.24E-01	0.31	9.17E-02	-0.18	0.47
IL-7	0.12	0.61	0.14	0.49	0.09	0.78
IL-8	-0.10	0.62	0.00	1.00	-0.18	0.47
IL-10	0.18	0.26	0.31	0.09	0.14	0.61
IL-12p40	0.12	0.61	0.12	0.58	0.07	0.85
IL-15	-0.04	0.74	0.10	0.69	-0.24	0.37
IL-16	0.11	0.61	0.28	0.11	-0.02	0.95
IL-17	-0.07	0.62	-0.15	0.49	-0.05	0.91
TNF-α	0.02	0.92	0.25	0.15	-0.27	0.37
TNF-β	-0.06	0.69	0.05	0.78	-0.15	0.59
VEGF	-0.09	0.62	-0.07	0.78	-0.09	0.78

Supplementary Table 2: Control demographics

	All (n=50)	Males (n=25)	Females (n=25)	Males vs. Females p-value
Age at Exam	54.8 \pm 6.4	55.1 \pm 7.1	54.6 \pm 5.7	P=0.88