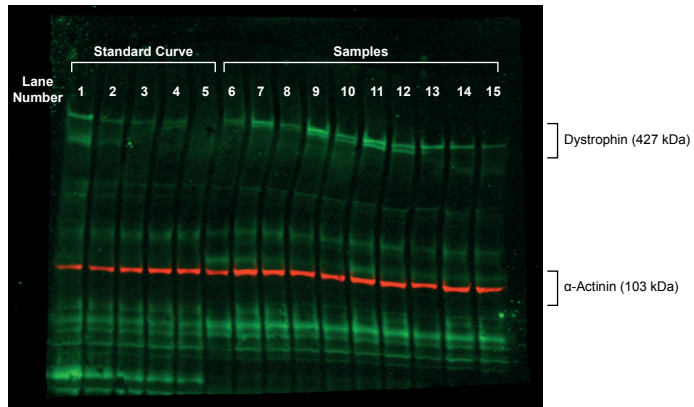
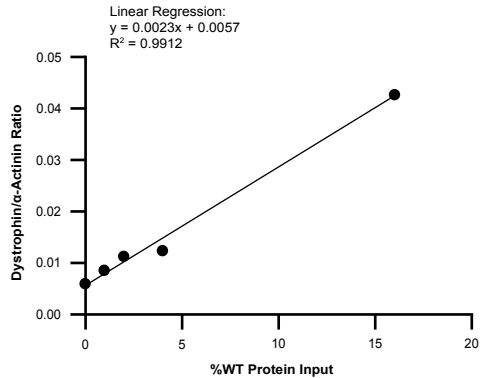


Supplemental figures and figure legends

A

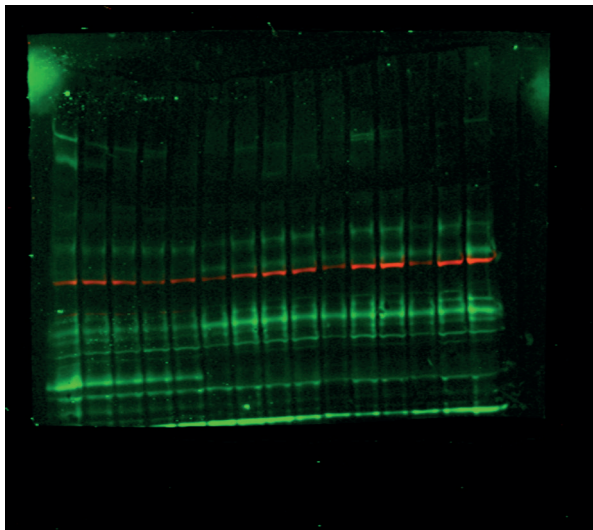


B



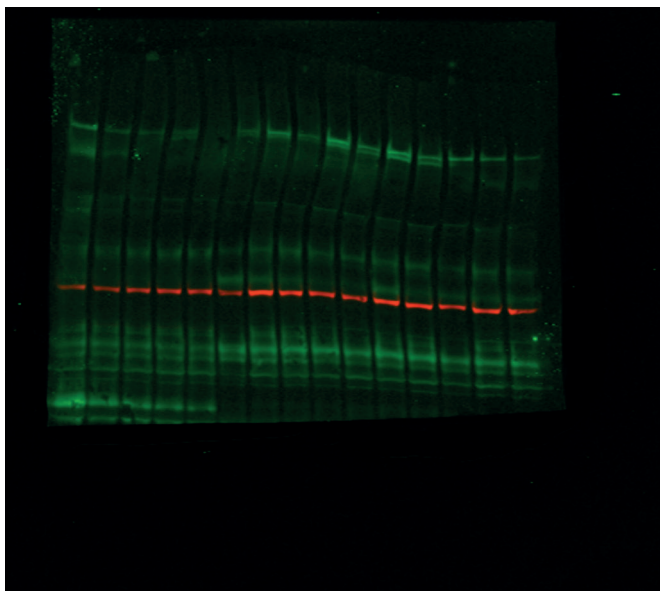
C

Gel 1



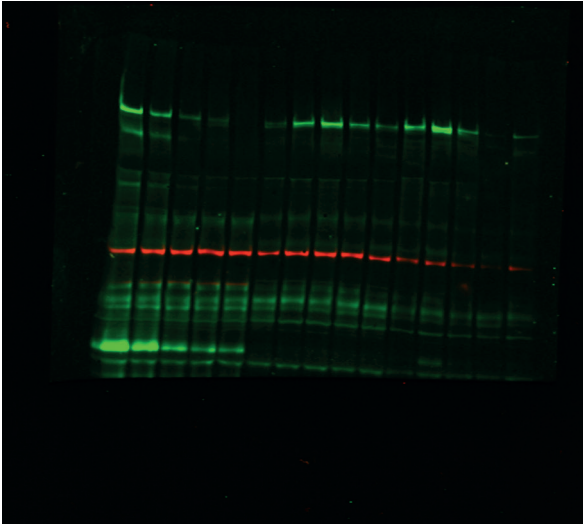
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	1	Quadriceps
7	2	Quadriceps
8	3	Quadriceps
9	4	Quadriceps
10	5	Quadriceps
11	31	Quadriceps
12	32	Quadriceps
13	33	Quadriceps
14	34	Quadriceps
15	35	Quadriceps

Gel 2



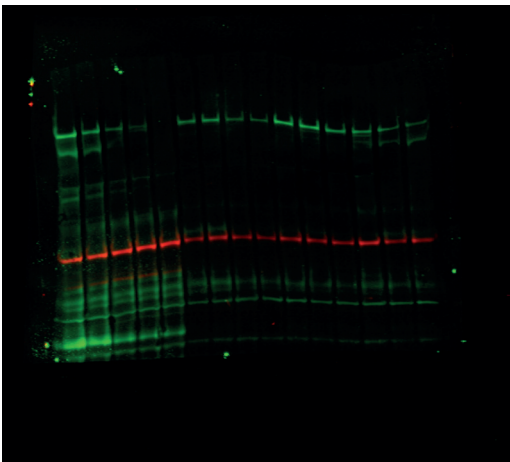
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	36	Quadriceps
7	37	Quadriceps
8	38	Quadriceps
9	39	Quadriceps
10	40	Quadriceps
11	N/A	N/A
12	7	Quadriceps
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 3



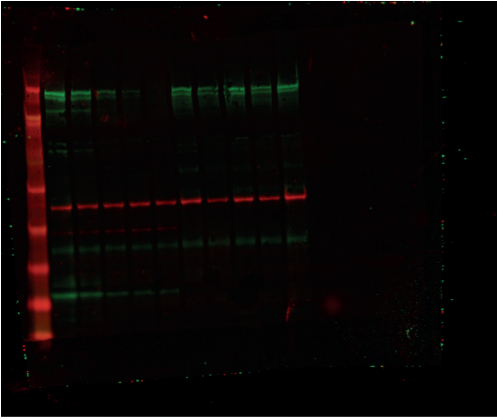
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	41	Quadriceps
7	42	Quadriceps
8	43	Quadriceps
9	44	Quadriceps
10	45	Quadriceps
11	11	Quadriceps
12	12	Quadriceps
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 4



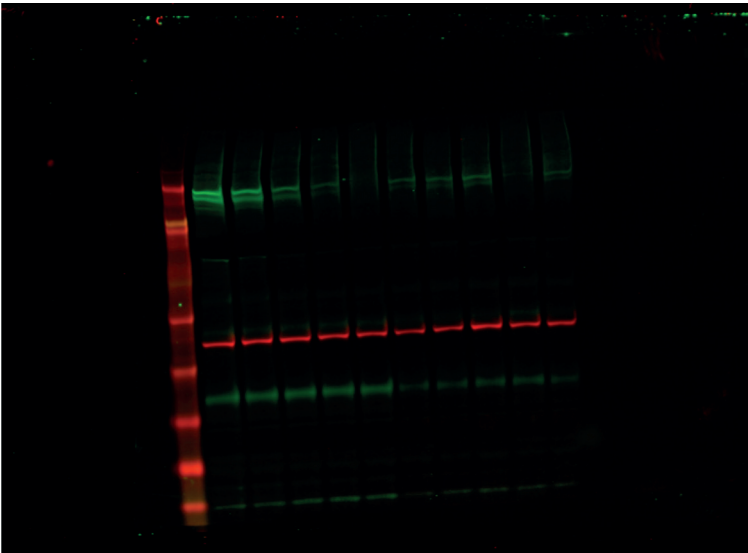
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	46	Quadriceps
7	47	Quadriceps
8	48	Quadriceps
9	49	Quadriceps
10	50	Quadriceps
11	16	Quadriceps
12	17	Quadriceps
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 5



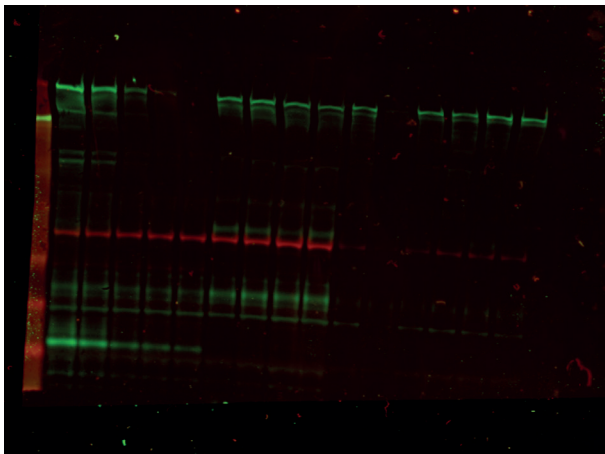
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	21	Quadriceps
7	22	Quadriceps
8	23	Quadriceps
9	24	Quadriceps
10	25	Quadriceps
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 6



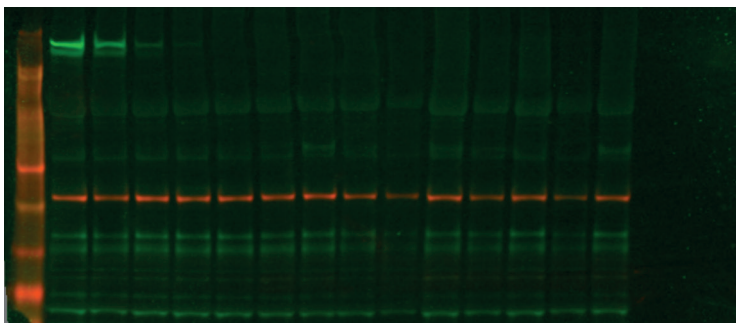
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	26	Quadriceps
7	27	Quadriceps
8	28	Quadriceps
9	29	Quadriceps
10	30	Quadriceps
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 7



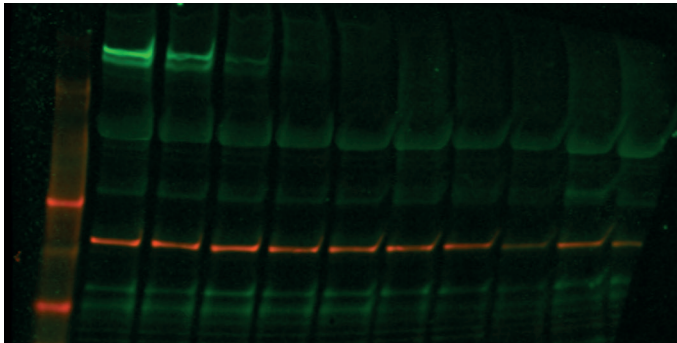
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	6	Quadriceps
7	8	Quadriceps
8	9	Quadriceps
9	10	Quadriceps
10	13	Quadriceps
11	14	Quadriceps
12	15	Quadriceps
13	18	Quadriceps
14	19	Quadriceps
15	20	Quadriceps

Gel 8



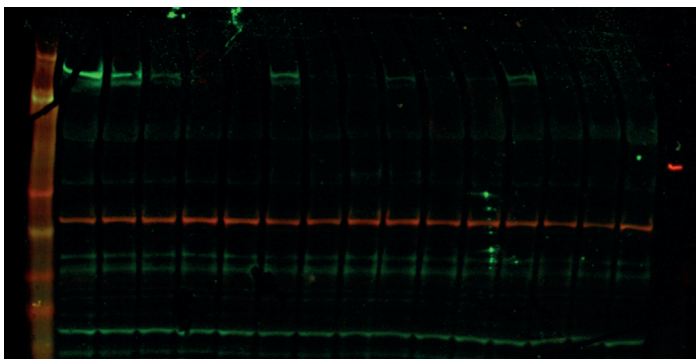
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	51	Quadriceps
7	52	Quadriceps
8	53	Quadriceps
9	54	Quadriceps
10	56	Quadriceps
11	57	Quadriceps
12	58	Quadriceps
13	59	Quadriceps
14	60	Quadriceps
15	N/A	N/A

Gel 9



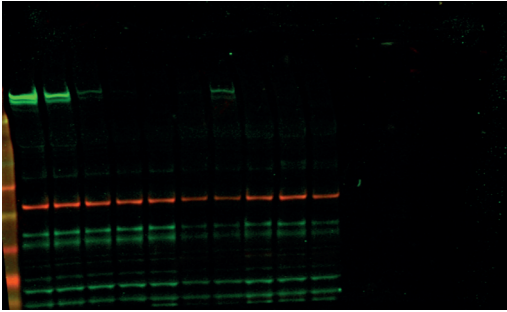
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	61	Quadriceps
7	62	Quadriceps
8	63	Quadriceps
9	64	Quadriceps
10	65	Quadriceps
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 10



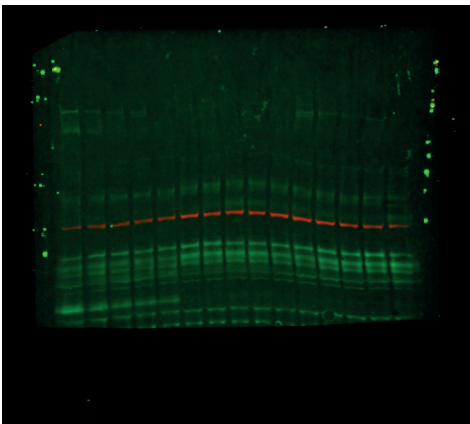
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	66	Quadriceps
7	67	Quadriceps
8	68	Quadriceps
9	69	Quadriceps
10	70	Quadriceps
11	71	Quadriceps
12	72	Quadriceps
13	73	Quadriceps
14	74	Quadriceps
15	75	Quadriceps

Gel 11



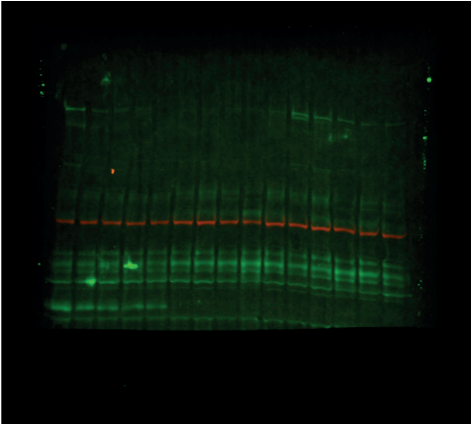
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	76	Quadriceps
7	77	Quadriceps
8	78	Quadriceps
9	79	Quadriceps
10	80	Quadriceps
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 12



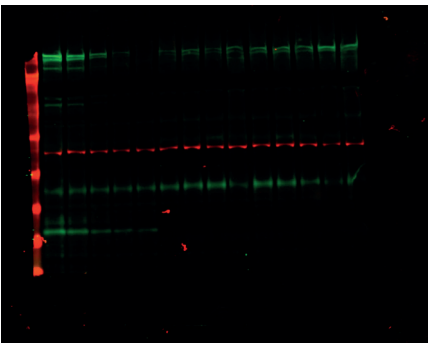
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	31	Tibialis Anterior
7	32	Tibialis Anterior
8	33	Tibialis Anterior
9	34	Tibialis Anterior
10	35	Tibialis Anterior
11	36	Tibialis Anterior
12	37	Tibialis Anterior
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 13



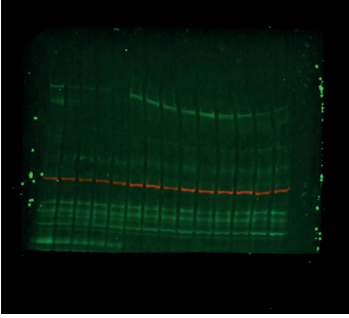
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	1	Tibialis Anterior
7	2	Tibialis Anterior
8	3	Tibialis Anterior
9	4	Tibialis Anterior
10	5	Tibialis Anterior
11	6	Tibialis Anterior
12	7	Tibialis Anterior
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 14



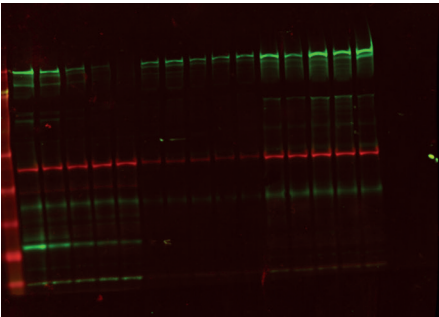
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	38	Tibialis Anterior
7	39	Tibialis Anterior
8	40	Tibialis Anterior
9	49	Tibialis Anterior
10	8	Tibialis Anterior
11	9	Tibialis Anterior
12	10	Tibialis Anterior
13	46	Tibialis Anterior
14	47	Tibialis Anterior
15	N/A	N/A

Gel 15



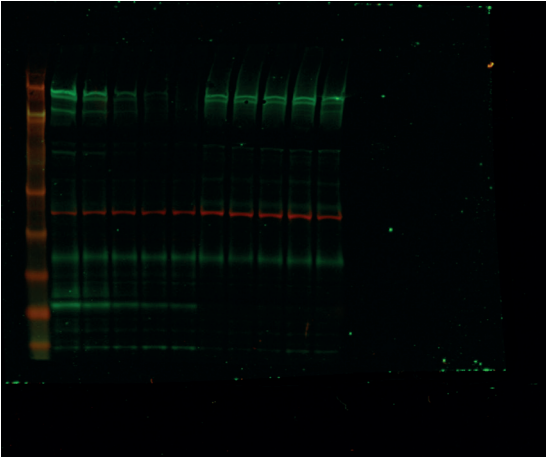
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	41	Tibialis Anterior
7	42	Tibialis Anterior
8	43	Tibialis Anterior
9	44	Tibialis Anterior
10	N/A	N/A
11	N/A	N/A
12	48	Tibialis Anterior
13	N/A	N/A
14	50	Tibialis Anterior
15	N/A	N/A

Gel 16



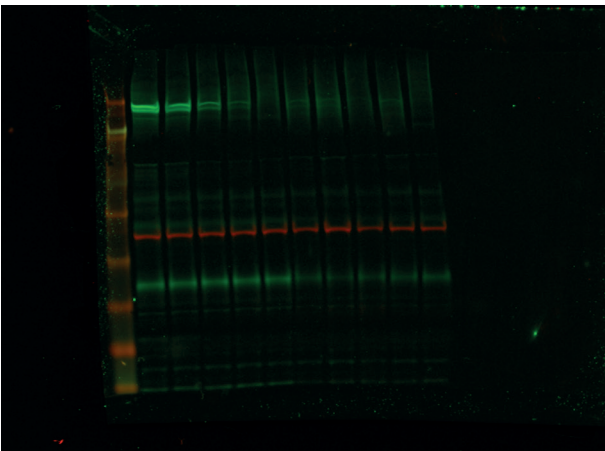
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	11	Tibialis Anterior
7	12	Tibialis Anterior
8	13	Tibialis Anterior
9	14	Tibialis Anterior
10	15	Tibialis Anterior
11	16	Tibialis Anterior
12	17	Tibialis Anterior
13	18	Tibialis Anterior
14	19	Tibialis Anterior
15	20	Tibialis Anterior

Gel 17



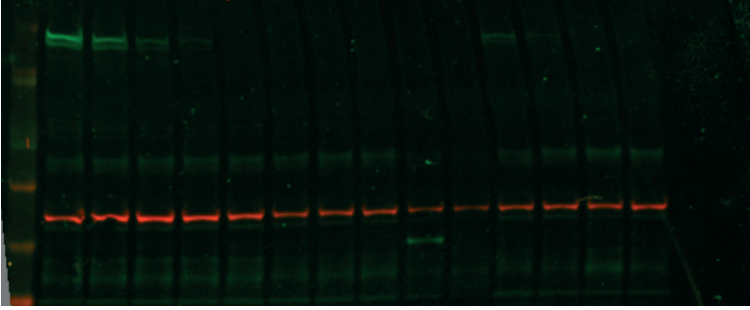
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	21	Tibialis Anterior
7	22	Tibialis Anterior
8	23	Tibialis Anterior
9	24	Tibialis Anterior
10	25	Tibialis Anterior
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 18



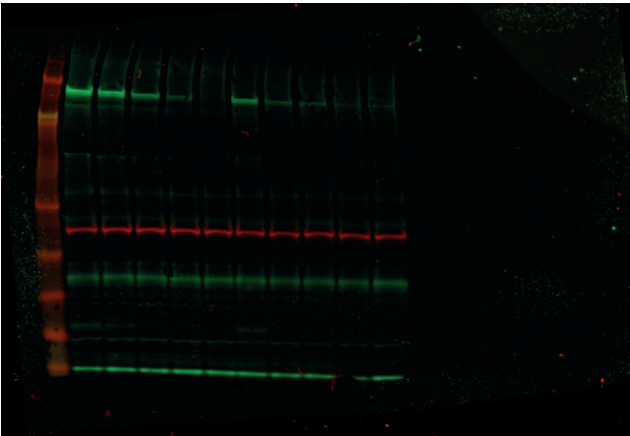
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	26	Tibialis Anterior
7	27	Tibialis Anterior
8	28	Tibialis Anterior
9	29	Tibialis Anterior
10	30	Tibialis Anterior
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 19



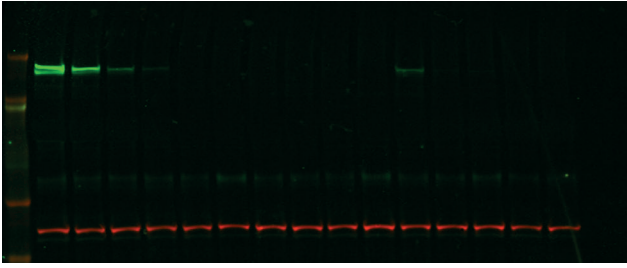
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	51	Tibialis Anterior
7	52	Tibialis Anterior
8	53	Tibialis Anterior
9	54	Tibialis Anterior
10	71	Tibialis Anterior
11	72	Tibialis Anterior
12	73	Tibialis Anterior
13	74	Tibialis Anterior
14	75	Tibialis Anterior
15	N/A	N/A

Gel 20



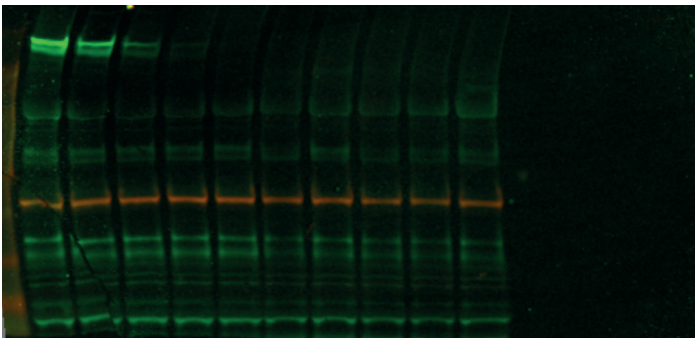
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	66	Tibialis Anterior
7	67	Tibialis Anterior
8	68	Tibialis Anterior
9	69	Tibialis Anterior
10	70	Tibialis Anterior
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 21



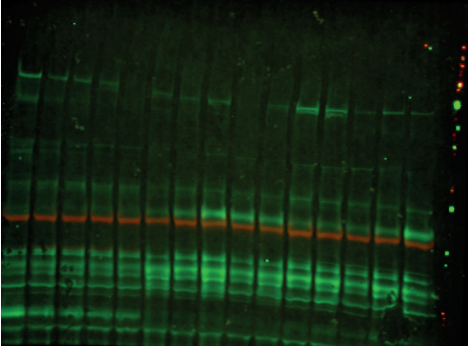
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	56	Tibialis Anterior
7	57	Tibialis Anterior
8	58	Tibialis Anterior
9	59	Tibialis Anterior
10	60	Tibialis Anterior
11	76	Tibialis Anterior
12	77	Tibialis Anterior
13	78	Tibialis Anterior
14	79	Tibialis Anterior
15	80	Tibialis Anterior

Gel 22



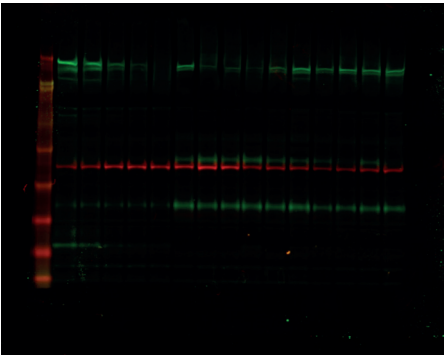
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	61	Tibialis Anterior
7	62	Tibialis Anterior
8	63	Tibialis Anterior
9	64	Tibialis Anterior
10	65	Tibialis Anterior
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 23



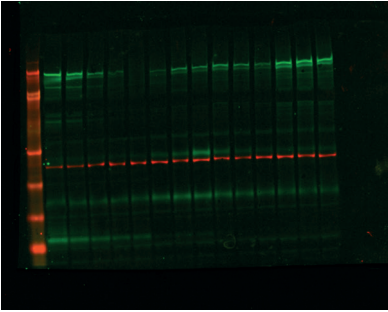
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	31	Gastrocnemius
7	32	Gastrocnemius
8	33	Gastrocnemius
9	34	Gastrocnemius
10	35	Gastrocnemius
11	36	Gastrocnemius
12	37	Gastrocnemius
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 24



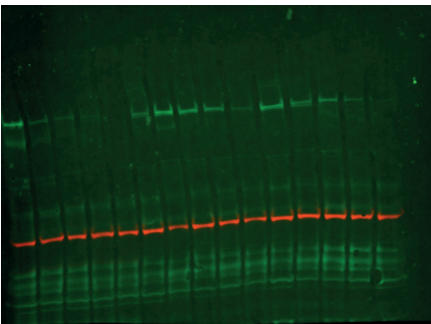
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	1	Gastrocnemius
7	2	Gastrocnemius
8	3	Gastrocnemius
9	4	Gastrocnemius
10	5	Gastrocnemius
11	6	Gastrocnemius
12	7	Gastrocnemius
13	8	Gastrocnemius
14	9	Gastrocnemius
15	10	Gastrocnemius

Gel 25



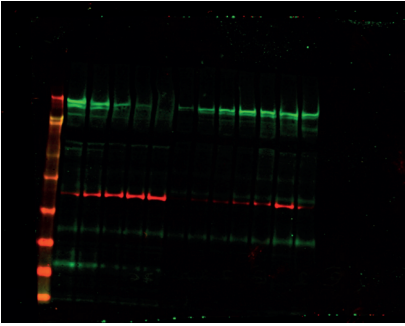
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	38	Gastrocnemius
7	39	Gastrocnemius
8	40	Gastrocnemius
9	48	Gastrocnemius
10	49	Gastrocnemius
11	50	Gastrocnemius
12	18	Gastrocnemius
13	19	Gastrocnemius
14	20	Gastrocnemius
15	N/A	N/A

Gel 26



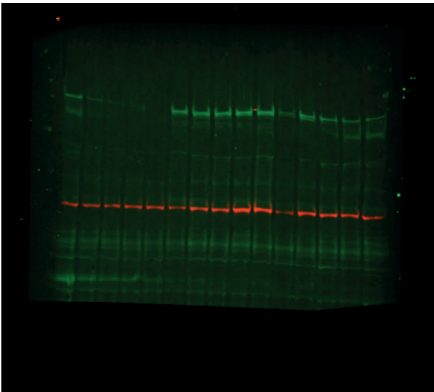
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	41	Gastrocnemius
7	42	Gastrocnemius
8	43	Gastrocnemius
9	44	Gastrocnemius
10	45	Gastrocnemius
11	46	Gastrocnemius
12	47	Gastrocnemius
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 27



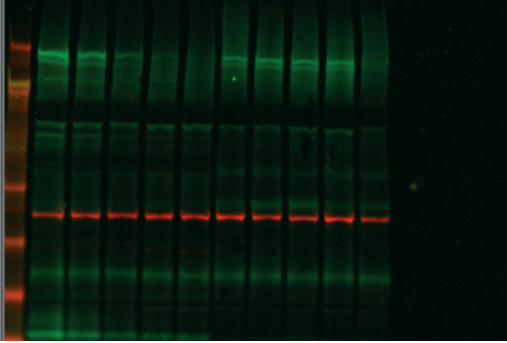
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	11	Gastrocnemius
7	12	Gastrocnemius
8	13	Gastrocnemius
9	14	Gastrocnemius
10	15	Gastrocnemius
11	17	Gastrocnemius
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 28



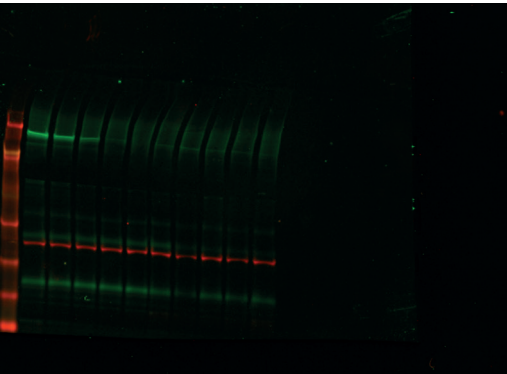
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	N/A	N/A
7	N/A	N/A
8	N/A	N/A
9	N/A	N/A
10	N/A	N/A
11	16	Gastrocnemius
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 29



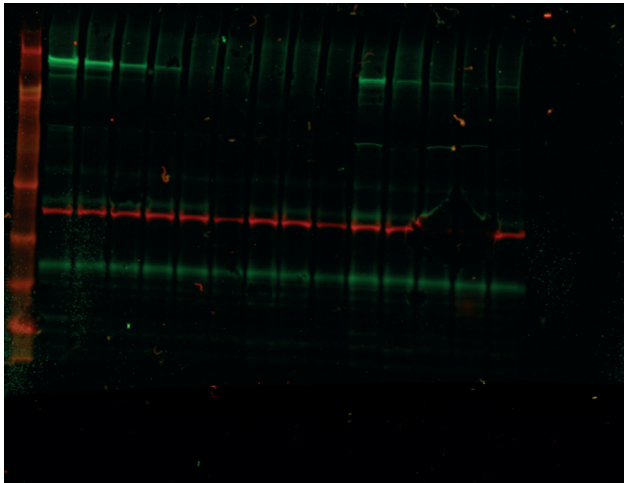
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	21	Gastrocnemius
7	22	Gastrocnemius
8	23	Gastrocnemius
9	24	Gastrocnemius
10	25	Gastrocnemius
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 30



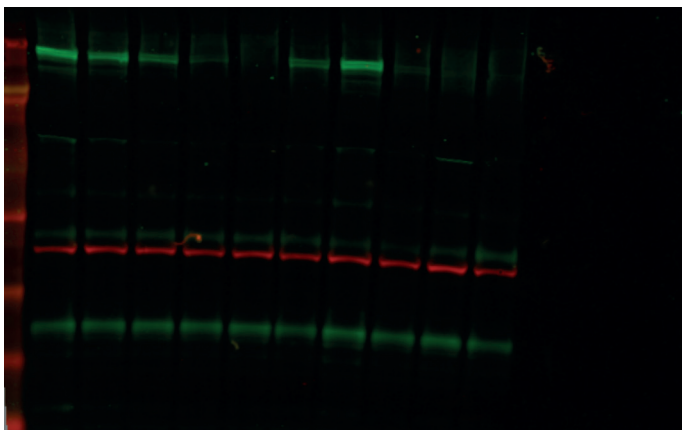
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	26	Gastrocnemius
7	27	Gastrocnemius
8	28	Gastrocnemius
9	29	Gastrocnemius
10	30	Gastrocnemius
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 31



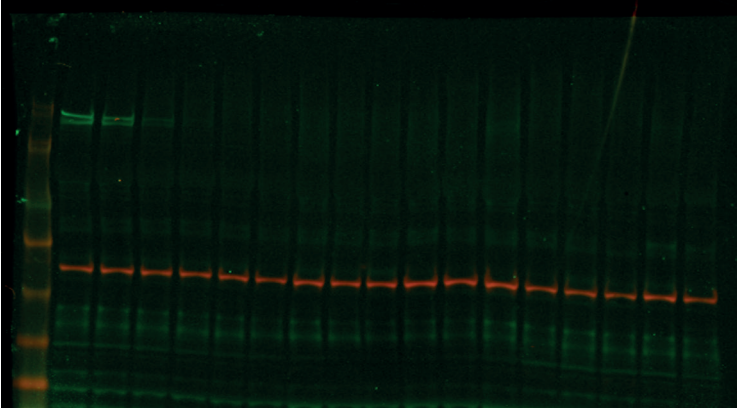
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	51	Gastrocnemius
7	52	Gastrocnemius
8	53	Gastrocnemius
9	54	Gastrocnemius
10	71	Gastrocnemius
11	72	Gastrocnemius
12	N/A	N/A
13	N/A	N/A
14	75	Gastrocnemius
15	N/A	N/A

Gel 32



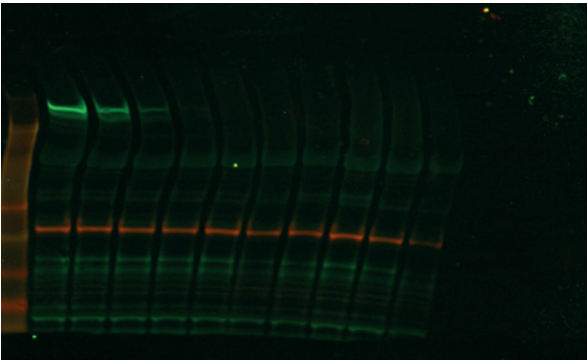
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	66	Gastrocnemius
7	67	Gastrocnemius
8	68	Gastrocnemius
9	69	Gastrocnemius
10	70	Gastrocnemius
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 33



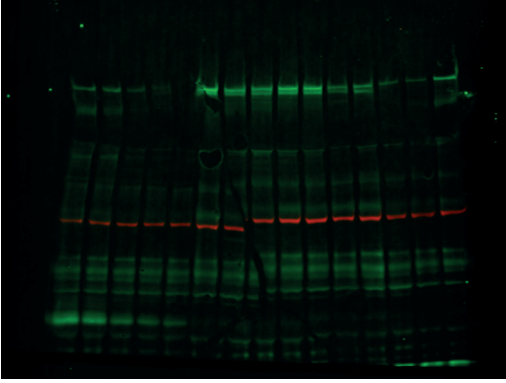
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	56	Gastrocnemius
7	57	Gastrocnemius
8	58	Gastrocnemius
9	59	Gastrocnemius
10	60	Gastrocnemius
11	76	Gastrocnemius
12	77	Gastrocnemius
13	78	Gastrocnemius
14	79	Gastrocnemius
15	80	Gastrocnemius
16	73	Gastrocnemius
17	74	Gastrocnemius

Gel 34



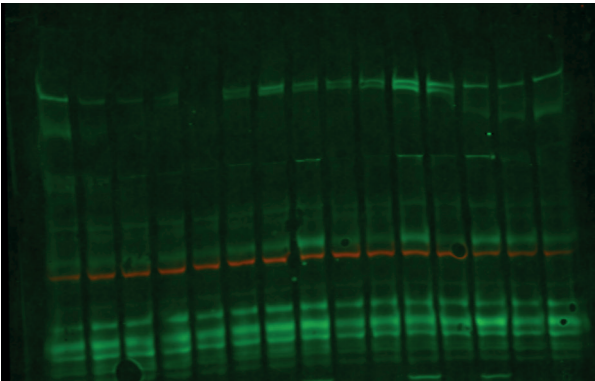
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	61	Gastrocnemius
7	62	Gastrocnemius
8	63	Gastrocnemius
9	64	Gastrocnemius
10	65	Gastrocnemius
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 35



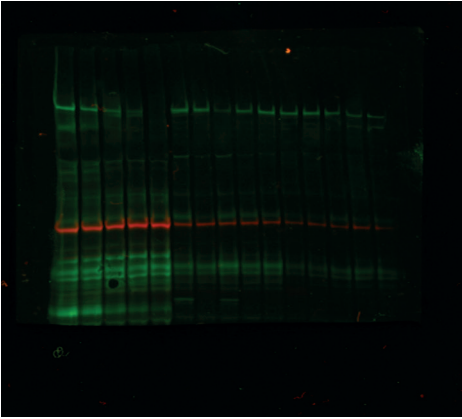
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	1	Diaphragm
7	2	Diaphragm
8	3	Diaphragm
9	4	Diaphragm
10	5	Diaphragm
11	6	Diaphragm
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 36



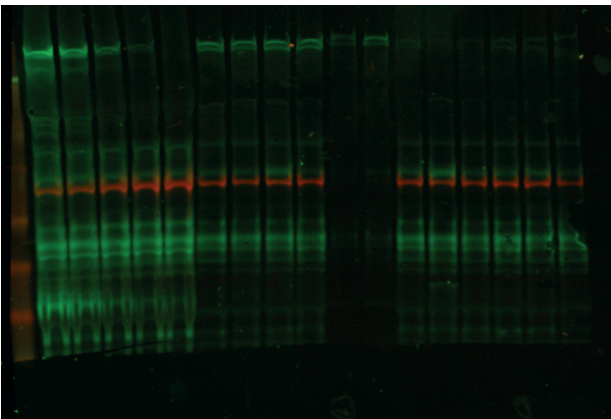
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	36	Diaphragm
7	37	Diaphragm
8	38	Diaphragm
9	39	Diaphragm
10	40	Diaphragm
11	41	Diaphragm
12	42	Diaphragm
13	43	Diaphragm
14	44	Diaphragm
15	45	Diaphragm

Gel 37



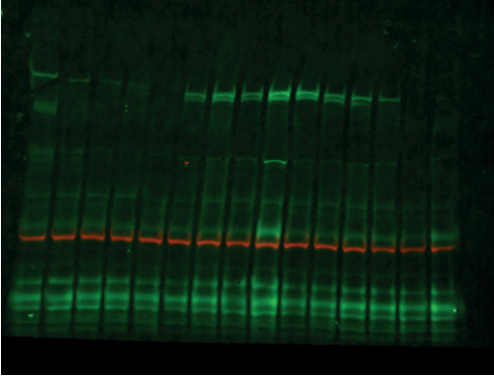
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	N/A	N/A
7	N/A	N/A
8	N/A	N/A
9	N/A	N/A
10	N/A	N/A
11	11	Diaphragm
12	12	Diaphragm
13	13	Diaphragm
14	14	Diaphragm
15	15	Diaphragm

Gel 38



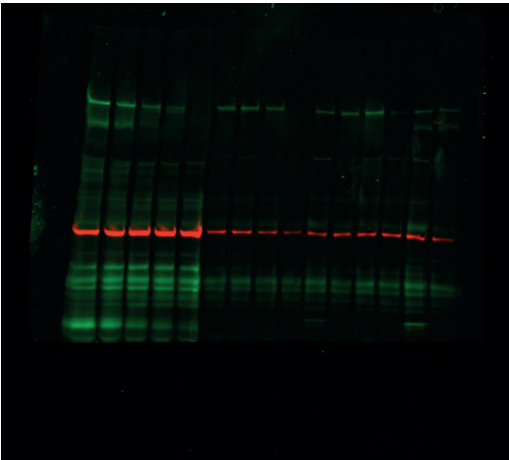
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	7	Diaphragm
7	8	Diaphragm
8	9	Diaphragm
9	10	Diaphragm
10	N/A	N/A
11	N/A	N/A
12	31	Diaphragm
13	32	Diaphragm
14	33	Diaphragm
15	34	Diaphragm
16	35	Diaphragm
17	49	Diaphragm

Gel 39



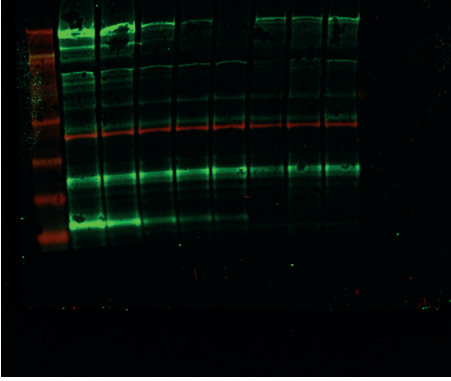
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	N/A	Diaphragm
7	N/A	Diaphragm
8	18	Diaphragm
9	N/A	Diaphragm
10	N/A	Diaphragm
11	46	Diaphragm
12	47	Diaphragm
13	48	Diaphragm
14	N/A	Diaphragm
15	50	Diaphragm

Gel 40



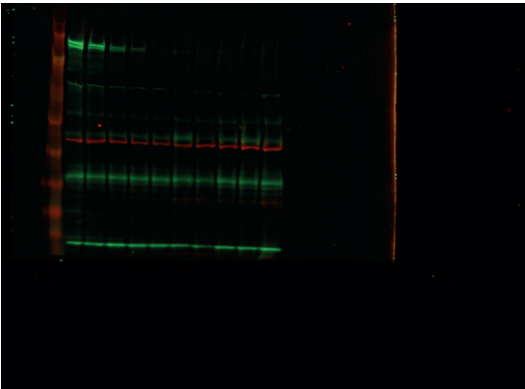
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	16	Diaphragm
7	17	Diaphragm
8	N/A	N/A
9	19	Diaphragm
10	20	Diaphragm
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 41



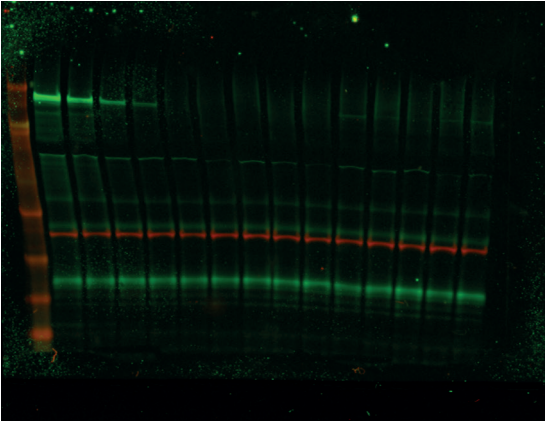
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	21	Diaphragm
7	22	Diaphragm
8	23	Diaphragm
9	N/A	N/A
10	N/A	N/A
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 42



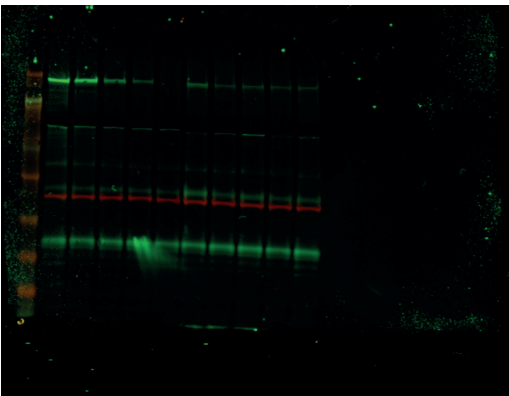
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	26	Diaphragm
7	27	Diaphragm
8	28	Diaphragm
9	29	Diaphragm
10	30	Diaphragm
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 43



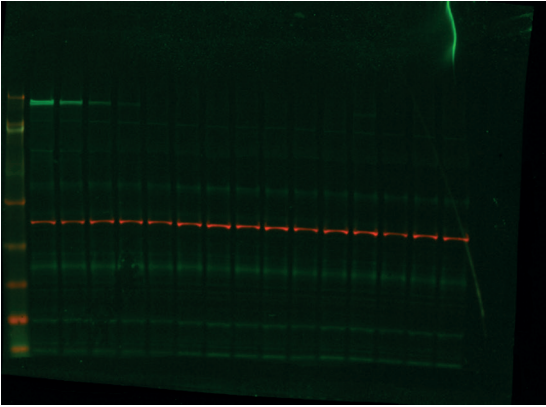
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	51	Diaphragm
7	52	Diaphragm
8	53	Diaphragm
9	54	Diaphragm
10	71	Diaphragm
11	72	Diaphragm
12	73	Diaphragm
13	74	Diaphragm
14	75	Diaphragm
15	N/A	N/A

Gel 44



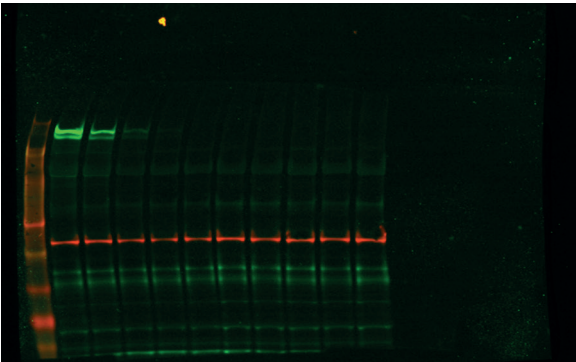
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	66	Diaphragm
7	67	Diaphragm
8	68	Diaphragm
9	69	Diaphragm
10	70	Diaphragm
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 45



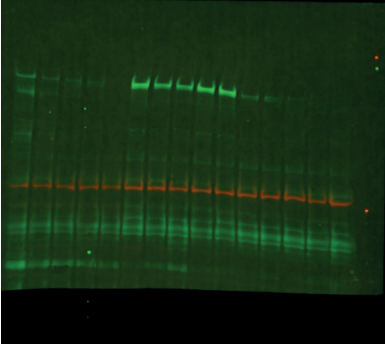
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	56	Diaphragm
7	57	Diaphragm
8	58	Diaphragm
9	59	Diaphragm
10	60	Diaphragm
11	76	Diaphragm
12	77	Diaphragm
13	78	Diaphragm
14	79	Diaphragm
15	80	Diaphragm

Gel 46



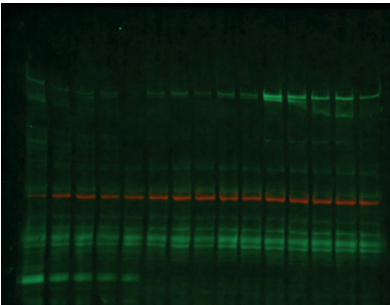
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	61	Diaphragm
7	62	Diaphragm
8	63	Diaphragm
9	64	Diaphragm
10	65	Diaphragm
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 47



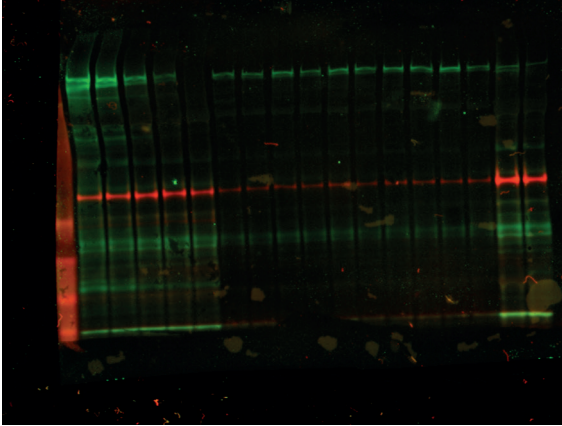
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	N/A	N/A
7	N/A	N/A
8	N/A	N/A
9	N/A	N/A
10	N/A	N/A
11	31	Heart
12	32	Heart
13	33	Heart
14	34	Heart
15	35	Heart

Gel 48



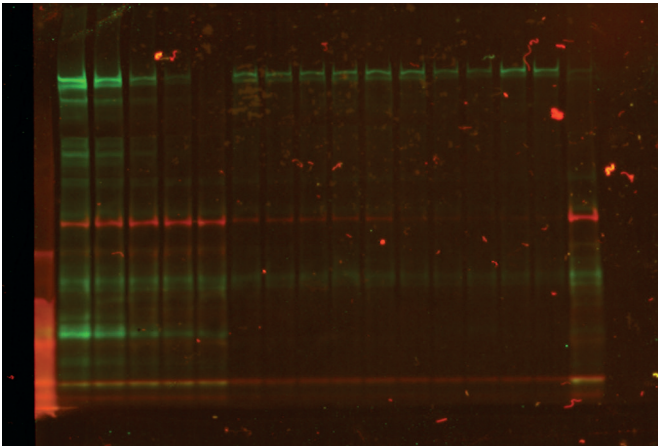
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	1	Heart
7	2	Heart
8	3	Heart
9	4	Heart
10	5	Heart
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 49



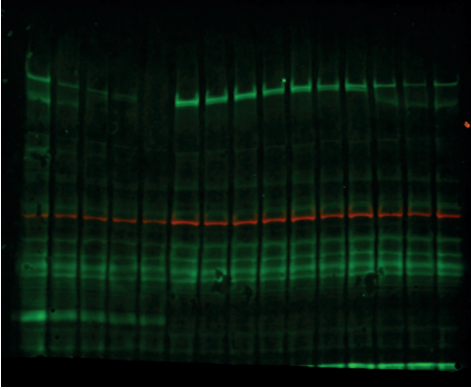
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	36	Heart
7	37	Heart
8	38	Heart
9	39	Heart
10	40	Heart
11	6	Heart
12	7	Heart
13	8	Heart
14	9	Heart
15	10	Heart
16	N/A	N/A
17	N/A	N/A

Gel 50



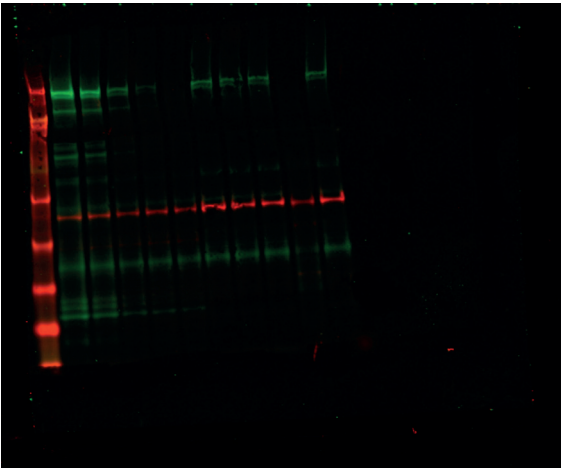
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	41	Heart
7	42	Heart
8	43	Heart
9	44	Heart
10	45	Heart
11	11	Heart
12	12	Heart
13	13	Heart
14	14	Heart
15	15	Heart
16	N/A	N/A

Gel 51



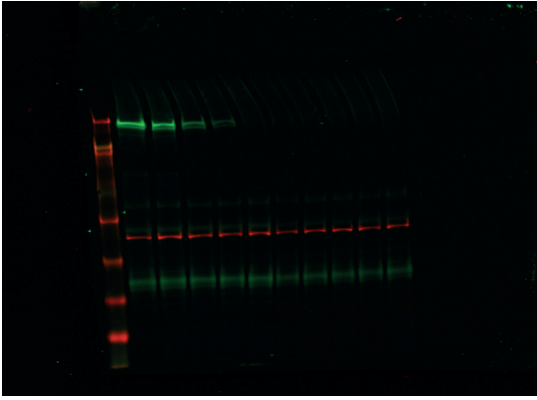
Lane Number	Mouse ID	Tissue
1	16% WT	Standard
2	4% WT	Standard
3	2% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	16	Heart
7	17	Heart
8	18	Heart
9	19	Heart
10	20	Heart
11	46	Heart
12	47	Heart
13	48	Heart
14	49	Heart
15	50	Heart

Gel 52



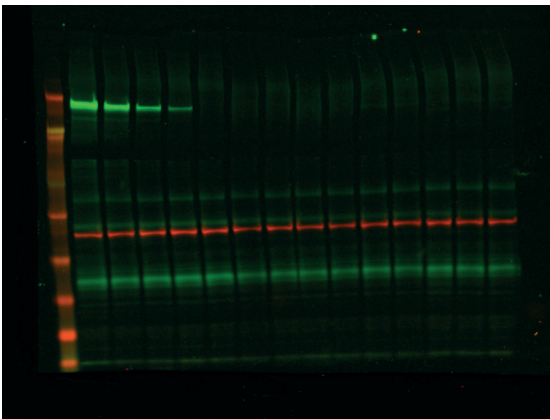
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	21	Heart
7	22	Heart
8	23	Heart
9	24	Heart
10	25	Heart
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 53



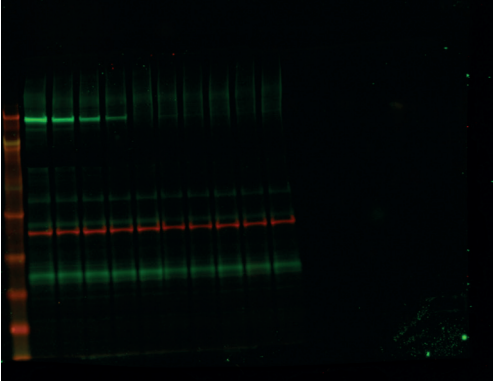
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	26	Heart
7	27	Heart
8	28	Heart
9	29	Heart
10	30	Heart
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 54



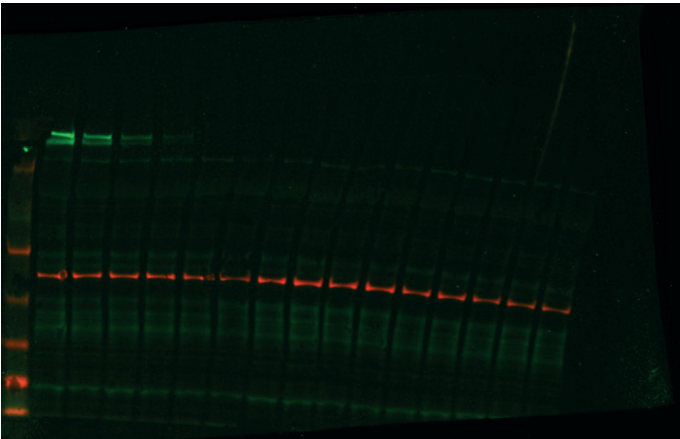
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	51	Heart
7	52	Heart
8	53	Heart
9	54	Heart
10	71	Heart
11	72	Heart
12	73	Heart
13	74	Heart
14	75	Heart
15	N/A	N/A

Gel 55



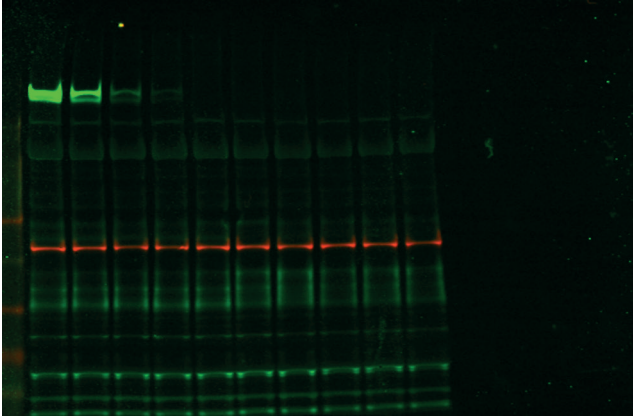
Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	66	Heart
7	67	Heart
8	68	Heart
9	69	Heart
10	70	Heart
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Gel 56



Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	56	Heart
7	57	Heart
8	58	Heart
9	59	Heart
10	60	Heart
11	76	Heart
12	77	Heart
13	78	Heart
14	79	Heart
15	80	Heart

Gel 57



Lane Number	Mouse ID	Tissue
1	32% WT	Standard
2	16% WT	Standard
3	4% WT	Standard
4	1% WT	Standard
5	0% WT	Standard
6	61	Heart
7	62	Heart
8	63	Heart
9	64	Heart
10	65	Heart
11	N/A	N/A
12	N/A	N/A
13	N/A	N/A
14	N/A	N/A
15	N/A	N/A

Figure S1. Fluorescent western blot images and standard curve quantification. Each gel was run with a standard curve of WT mouse protein diluted into *mdx* mouse protein. Raw fluorescence was measured in the dystrophin and alpha-actinin channels for each standard and unknown sample. (A) Representative western blot. (B) The dystrophin/alpha-actinin ratio was then generated and plotted against the known percent WT protein in each standard to generate an equation. Unknown samples were then interpolated from their dystrophin/alpha-actinin ratio based on the equation of the standard curve. If the raw dystrophin signal of the unknown sample was above the standard curve, the sample was diluted until it fell within the standard curve. (C) Unedited fluorescent western blot images used for dystrophin quantitation. WT, wild type.

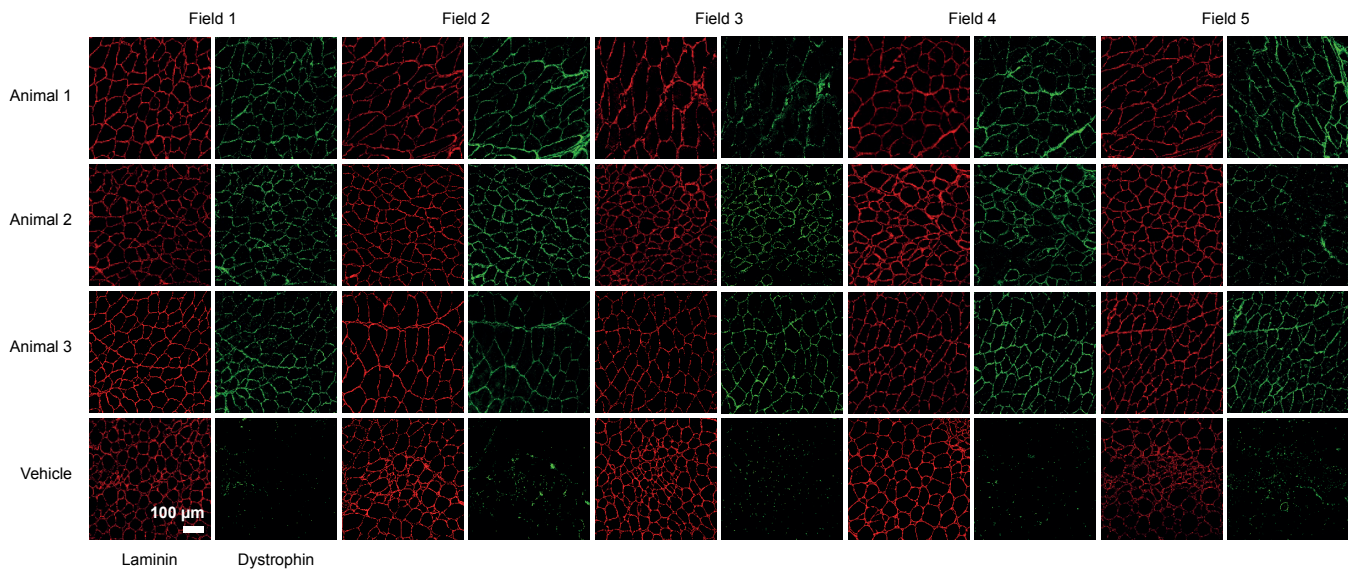


Figure S2. Immunofluorescent micrographs used to quantify percent positive myofibers in quadriceps of *mdx* mice. Five-week-old *mdx* mice were injected via tail vein with 30 mg/kg PMO-equivalents of FORCE-M23D. Immunofluorescence images with dystrophin (green) and laminin (red) staining of quadriceps isolated 8 weeks post-dose.

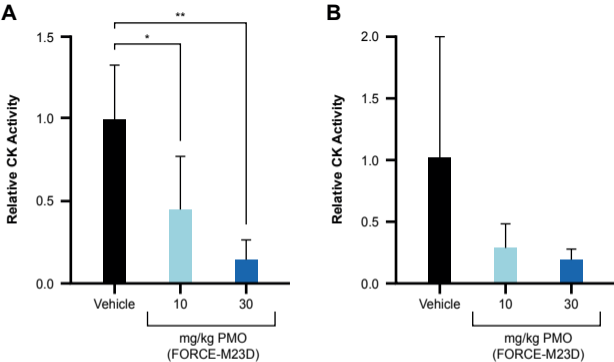


Figure S3. Treatment with FORCE-M23D reduces serum creatine kinase activity in *mdx* mice. Five-week-old *mdx* mice injected via tail vein with 10 mg/kg or 30 mg/kg PMO-equivalents of FORCE-M23D were sacrificed and serum CK was assessed 28 (A) or 56 (B) days post-dose. Data are normalized to the mean serum CK of vehicle-treated *mdx* mice at the matched time points. Data represent mean \pm SD. * $p < 0.05$; ** $p < 0.01$. CK, creatine kinase; PMO, phosphorodiamidate morpholino oligomer.

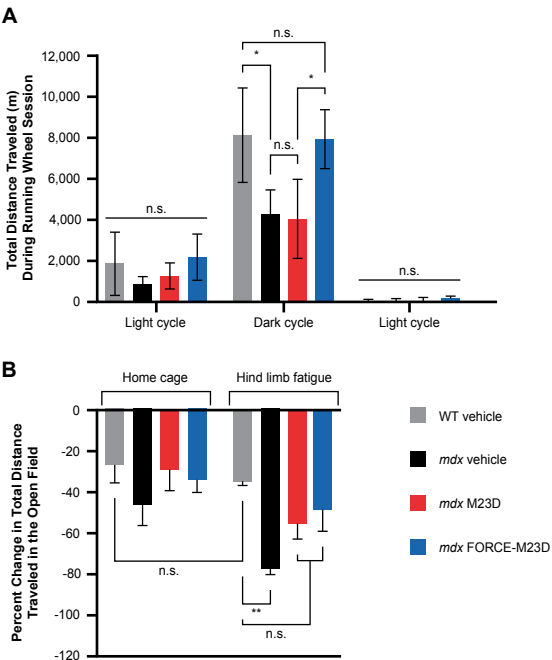


Figure S4. FORCE-M23D-mediated dystrophin restoration leads to improved functional outcomes in *mdx* mice. Functional assessments were performed 4 weeks following administration of 5-week-old WT or *mdx* mice with vehicle or *mdx* mice with 30 mg/kg unconjugated M23D or 30 mg/kg PMO-equivalents of FORCE-M23D. (A) Total distance traveled on a running wheel for an uninterrupted 24-h period. (B) Percent change in total distance traveled in an open field before and after hind limb fatigue challenge. Data are expressed as mean \pm SD. * $p \leq 0.05$, ** $p \leq 0.01$. n.s., not significant; PMO, phosphorodiamidate morpholino oligomer; WT, wild type.

Manuscript Group #	Treatment	Tissue Harvest (weeks post dose)	Manuscript Animal ID	Quadriceps		Tibialis Anterior		Gastrocnemius		Diaphragm		Heart	
				Gel #	Lane #	Gel #	Lane #	Gel #	Lane #	Gel #	Lane #	Gel #	Lane #
Group 1	30 mg/kg PMO-equivalent FORCE-M23D	0.4 wks	1	1	6	13	6	24	6	35	6	48	6
			2	1	7	13	7	24	7	35	7	48	7
			3	1	8	13	8	24	8	35	8	48	8
			4	1	9	13	9	24	9	35	9	48	9
			5	1	10	13	10	24	10	35	10	48	10
Group 2	30 mg/kg PMO-equivalent FORCE-M23D	1 wk	6	7	6	13	11	24	11	35	11	49	11
			7	2	12	13	12	24	12	38	6	49	12
			8	7	7	14	10	24	13	38	7	49	13
			9	7	8	14	11	24	14	38	8	49	14
			10	7	9	14	12	24	15	38	9	49	15
Group 3	30 mg/kg PMO-equivalent FORCE-M23D	4 wks	11	3	11	16	6	27	6	37	11	50	11
			12	3	12	16	7	27	7	37	12	50	12
			13	7	10	16	8	27	8	37	13	50	13
			14	7	11	16	9	27	9	37	14	50	14
			15	7	12	16	10	27	10	37	15	50	15
Group 4	30 mg/kg PMO-equivalent FORCE-M23D	8 wks	16	4	11	16	11	28	11	40	6	51	6
			17	4	12	16	12	27	11	40	7	51	7
			18	7	13	16	13	25	12	39	8	51	8
			19	7	14	16	14	25	13	40	9	51	9
			20	7	15	16	15	25	14	40	10	51	10
Group 5	30 mg/kg PMO-equivalent FORCE-M23D	12 wks	21	5	6	17	6	29	6	41	6	52	6
			22	5	7	17	7	29	7	41	7	52	7
			23	5	8	17	8	29	8	41	8	52	8
			24	5	9	17	9	29	9	not tested		52	9
			25	5	10	17	10	29	10	not tested		52	10
Group 6	30 mg/kg PMO-equivalent FORCE-M23D	24 wks	26	6	6	18	6	30	6	42	6	53	6
			27	6	7	18	7	30	7	42	7	53	7
			28	6	8	18	8	30	8	42	8	53	8
			29	6	9	18	9	30	9	42	9	53	9
			30	6	10	18	10	30	10	42	10	53	10
Group 7	10 mg/kg PMO-equivalent FORCE-M23D	0.4 wks	31	1	11	12	6	23	6	38	12	47	11
			32	1	12	12	7	23	7	38	13	47	12
			33	1	13	12	8	23	8	38	14	47	13
			34	1	14	12	9	23	9	38	15	47	14
			35	1	15	12	10	23	10	38	16	47	15
Group 8	10 mg/kg PMO-equivalent FORCE-M23D	1 wk	36	2	6	12	11	23	11	36	6	49	6
			37	2	7	12	12	23	12	36	7	49	7
			38	2	8	14	6	25	6	36	8	49	8
			39	2	9	14	7	25	7	36	9	49	9
			40	2	10	14	8	25	8	36	10	49	10
Group 9	10 mg/kg PMO-equivalent FORCE-M23D	4 wks	41	3	6	15	6	26	6	36	11	50	6
			42	3	7	15	7	26	7	36	12	50	7
			43	3	8	15	8	26	8	36	13	50	8
			44	3	9	15	9	26	9	36	14	50	9
			45	3	10	not tested		26	10	36	15	50	10
Group 10	10 mg/kg PMO-equivalent FORCE-M23D	8 wks	46	4	6	14	13	26	11	39	11	51	46
			47	4	7	14	14	26	12	39	12	51	47
			48	4	8	15	12	25	9	39	13	51	48
			49	4	9	14	9	25	10	38	17	51	49
			50	4	10	14	14	25	11	39	15	51	50
Group 11	Vehicle	4 wks	51	8	6	19	6	31	6	43	6	54	6
			52	8	7	19	7	31	7	43	7	54	7
			53	8	8	19	8	31	8	43	8	54	8
			54	8	9	19	9	31	9	43	9	54	9
			55	not tested		not tested		not tested		not tested		not tested	
Group 12	Vehicle	8 wks	56	8	10	21	6	33	6	45	6	56	6
			57	8	11	21	7	33	7	45	7	56	7
			58	8	12	21	8	33	8	45	8	56	8
			59	8	13	21	9	33	9	45	9	56	9
			60	8	14	21	10	33	10	45	10	56	10
Group 13	Vehicle	12 wks	61	9	6	22	6	34	6	46	6	57	6
			62	9	7	22	7	34	7	46	7	57	7
			63	9	8	22	8	34	8	46	8	57	8
			64	9	9	22	9	34	9	46	9	57	9
			65	9	10	22	10	34	10	46	10	57	10
Group 14	30 mg/kg Unconjugated M23D	1 wk	66	10	6	20	6	32	6	44	6	55	6
			67	10	7	20	7	32	7	44	7	55	7
			68	10	8	20	8	32	8	44	8	55	8
			69	10	9	20	9	32	9	44	9	55	9
			70	10	10	20	10	32	10	44	10	55	10
Group 15	30 mg/kg Unconjugated M23D	4 wks	71	10	11	19	10	31	10	43	10	54	10
			72	10	12	19	11	31	11	43	11	54	11
			73	10	13	19	12	33	16	43	12	54	12
			74	10	14	19	13	33	17	43	13	54	13
			75	10	15	19	14	31	14	43	14	54	14
Group 16	30 mg/kg Unconjugated M23D	8 wks	76	11	6	21	11	33	11	45	11	56	11
			77	11	7	21	12	33	12	45	12	56	12
			78	11	8	21	13	33	13	45	13	56	13
			79	11	9	21	14	33	14	45	14	56	14
			80	11	10	21	15	33	15	45	15	56	15

Table S1. Reference key for quantitative western blots in Figure S1C.