

Table 1. Participant characteristics.

	Experimental group		Control group	
	Female	Male	Female	Male
<i>n</i>	6	5	4	4
Age (yrs)	23.4 (2.9)	25.7 (5.8)	24.1 (3.5)	25.5 (5.5)
Body mass, (kg)	64.0 (9.2)	77.5 (8.0)	63.7 (0.5)	76.0 (7.0)
Stature (cm)	167.8 (8.1)	177.2 (3.3)	166.0 (3.7)	181.8 (5.0)
Body mass index (kg m ⁻²)	22.7 (2.7)	24.7 (2.7)	23.2 (1.1)	23.1 (3.2)
Body fat (%)	30.8 (30.8)	25.1 (25.1)	30.3 (30.3)	17.9 (17.9)

Table 2. Primer sequences and average performance.

Symbol	Transcript name	Sequence	Mean Cq (SD) and efficiency
rRNA47S ETS	45S pre-ribosomal RNA	F: 5'-CTGTCGCTGGAGAGGTTGG-3' R: 3'-GGACGCGCGAGAGAACAG-5'	27.3 (1.9), E = 1.84
rRNA45S ETS	45S pre-ribosomal RNA	F: 5'-GCCTTCTCTAGCGATCTGAGAG-3' R: 3'-CCATAACGGAGGCAGAGACA-5'	24.0 (2.2), E = 1.89
rRNA45S ITS	45S pre-ribosomal RNA	F: 5'-TCCGAGACGCGACCTCAG-3' R: 3'-TCGCCGTTACTGAGGGAATC-5'	12.2 (2.2), E = 2.14
rRNA5.8S	5.8S ribosomal RNA	F: 5'-ACTCTTAGCGGTGGATCACTC-3' R: 3'-GTGTCGATGATCAATGTGTCCTG-5'	15.7 (1.9), E = 1.96
rRNA28S	28S ribosomal RNA	F: 5'-TGACGCGATGTGATTTCTGC-3' R: 3'-TAGATGACGAGGCATTTGGC-5'	10.7 (1.8), E = 2.07
rRNA18S	18S ribosomal RNA	F: 5'-TGCATGGCCGTTCTTAGTTG-3' R: 3'-AACGCCACTTGTCCTCTAAG-5'	10.3 (2.9), E = 1.98
rRNA5S	5S ribosomal RNA	F: 5'-TACGGCCATACCACCCTGAAC-3' R: 3'-GGTCTCCCATCCAAGTACTAACC-5'	17.1 (2.2), E = 2.00
RPL32	Ribosomal protein L32	F: 5'-AAGTTCCTGGTCCACAACG-3' R: 3'-CGGCACAGTAAGATTTGTTGC-5'	22.0 (1.6), E = 1.93
RPS6	Ribosomal protein S6	F: 5'-TTGAAGTGGACGATGAACGC-3' R: 3'-GGACCACATAACCCCTTCCATTC-5'	22.3 (1.7), E = 1.96
UBTF [1,4]	Upstream binding transcription factor	F: 5'-CCGATTCAGGGAGGATCAC-3' R: 3'-ACCTCCTTCGTAGTGGCATC-5'	28.4 (2.7), E = 1.87
UBTF [2,3]	Upstream binding transcription factor	F: 5'-CGGCCAGATGAGATCATGAGAG-3' R: 3'-GGGTGGACTTGGTGATACCC-5'	28.0 (1.8), E = 1.88
MYH7	Myosin heavy chain 7 (MHCslow)	F: 5'-AGGAGCTCACCTACCAGACG-3' R: 3'-TGCAGCTTGTCTACCAGGTC-5'	19.5 (2.3), E = 1.93
MYH2	Myosin heavy chain 2 (M)	F: 5'-CCAGGGTACGGGAGCTG-3' R: 3'-TCACTCGCCTCTCATGTTTG-5'	18.0 (1.9), E = 1.99
MYH1	Myosin heavy chain 1 (M)	F: 5'-GGCCAGGGTTCGTGAACCTT-3' R: 3'-TGCGTAGACCCTTGACAGC-5'	22.0 (2.5), E = 1.94
Lambda	Lambda external reference	F: 5'-Proprietary-3' R: 3'-Proprietary-5'	22.2 (2.0), E = 1.98

Table 3. Effect of UBF and rpS6 levels, sessions and de-training on RNA-levels.

Coefficient	Estimate ^a	SD	Lower 95% CI	Upper 95% CI
Intercept	5.91	0.06	5.80	6.03
UBF protein levels (SD-units)	0.06	0.02	0.02	0.10
Session 1-4 ^b	0.08	0.01	0.05	0.10
Session 4-8 ^c	-0.06	0.02	-0.11	-0.02
Session 8-12 ^d	-0.02	0.03	-0.07	0.03
De-training	-0.19	0.07	-0.32	-0.06
Between Participant variation	0.13	0.04	0.06	0.23
Between Participant:Leg variation	0.03	0.03	0.00	0.10
Residual SD	0.22	0.01	0.19	0.24
Intercept	5.88	0.06	5.77	6.00
rpS6 protein levels (SD-units)	0.01	0.03	-0.04	0.07
Session 1-4 ^b	0.08	0.01	0.05	0.11
Session 4-8 ^c	-0.06	0.03	-0.11	-0.01
Session 8-12 ^d	-0.02	0.03	-0.07	0.03
De-training	-0.21	0.07	-0.34	-0.07
Between Participant variation	0.13	0.05	0.06	0.24
Between Participant:Leg variation	0.03	0.02	0.00	0.09
Residual SD	0.22	0.01	0.20	0.25

^aThe dependent variable is total RNA levels (log); ^bSlope in response to session 1-4; ^cChange in slope in session 4-8; ^dChange in slope in session 8-12

Table 4. Total RNA as a predictor of muscle growth.

Coefficient	Estimate ^a	SD	Lower 95% CI	Upper 95% CI
Intercept	-0.20	0.58	-1.32	0.98
Sex (Male)	0.95	0.59	-0.31	2.10
Mean Total RNA	-0.40	0.27	-0.93	0.13
Mean Total RNA increase per session	0.31	0.10	0.09	0.51
Between Participant variation	0.45	0.33	0.02	1.27
Between Participant:Leg variation	0.63	0.30	0.05	1.21
Residual SD	0.92	0.14	0.68	1.24

^aThe dependent variable is Δ Muscle thickness (mm)