Table S1. Gene expression levels using an mTOR gene array

Gene Symbol	Sedentary		Exercise	
DOX	(-)	(+)	(-)	(+)
Akt1	4.6±0.01	5.0±0.25	4.2±0.18	5.6±0.91
Akt1s1	6.2±0.04	6.7±0.11	5.8±0.15	7.1±0.86
Akt2	4.3±0.06	4.7±0.17	3.9±0.13	4.8±0.58
Akt3	5.9±0.10	6.2±0.10	5.9±0.18	6.2±0.43
Cab39	3.4±0.13	3.6±0.18	3.2±0.09	3.8±0.55
Cab39l	5.7±0.05	5.8±0.13	5.5±0.11	5.7±0.22
Cdc42	1.9±0.01	1.9±0.10	1.8±0.12	2.0±0.13
Chuk	3.7±0.09	4.1±0.12	3.7±0.11	3.7±0.14
Ddit4	4.3±0.04	5.3±0.17	4.7±0.19	6.0±0.32
Ddit4l	10.0±0.09	10.0±0.12	9.8±0.15	9.7±0.33
Deptor	8.7±0.13	9.0±0.15	8.3±0.16	9.2±0.73
Eif4b	5.0±0.10	5.3±0.13	4.6±0.16	5.5±0.85
Eif4e	2.2±0.05	2.3±0.12	1.9±0.12	2.3±0.21
Eif4ebp1	3.8±0.10	4.0±0.07	3.9±0.16	3.6±0.07
Eif43bp2	7.8±0.13	8.3±0.09	7.6±0.22	8.2±0.59
Fkbp1a	3.6±0.09	3.9±0.17	3.3±0.11	4.2±0.55
Fkbp8	4.4±0.09	4.6±0.14	4.1±0.10	4.9±0.68
Gsk3b	5.2±0.00	5.5±0.12	5.0±0.14	5.7±0.51
Hif1a	4.2±0.06	4.4±0.11	4.0±0.07	4.4±0.24
Hras1	4.6±0.06	4.9±0.14	4.4±0.12	5.1±0.50
Hspa4	3.4±0.12	3.7±0.12	3.3±0.11	3.9±0.47
Igf1	6.3±0.15	6.7±0.07	6.5±0.19	6.7±0.12
Igfbp3	4.4±0.08	4.8±0.10	4.6±0.10	4.1±0.13
Ikbkb	8.1±0.14	8.4±0.23	7.6±0.16	8.8±0.91
Ilk	4.2±0.11	4.6±0.12	4.2±0.11	4.5±0.14
Ins2	14.1±0.15	15.1±0.59	13.7±0.06	14.8±0.34
Insr	5.0±0.07	5.4±0.15	4.6±0.18	5.8±0.88
Irs1	5.8±0.12	6.4±0.43	5.6±0.18	6.7±0.76
Mapk1	3.2±0.10	3.4±0.10	2.9±0.13	3.7±0.60
Mapk3	5.5±0.15	5.7±0.13	5.1±0.15	6.1±0.72
Mapkap1	5.5±0.07	5.7±0.12	5.3±0.12	5.7±0.16
Mlst8	8.0±0.09	8.2±0.09	7.5±0.08	8.3±0.51
Mtor	6.6±0.09	7.1±0.14	6.4±0.12	7.4±0.68
Myo1c	4.8±0.06	5.2±0.24	4.5±0.13	5.6±0.67
Pdpk1	6.0±0.04	6.2±0.13	5.7±0.11	6.4±0.63
Pik3c3	6.5±0.09	6.7±0.08	6.2±0.12	6.4±0.09

Pik3ca	5.2±0.09	5.4±0.07	4.9±0.14	5.5±0.45
Pik3cb	8.4±0.19	8.5±0.04	8.1±0.14	8.9±0.55
Pik3cd	9.9±0.12	9.9±0.11	9.7±0.15	10.5±0.64
Pik3cg	10.4±0.17	10.4±0.16	10.2±0.39	11.1±0.82
Pld1	8.2±0.08	8.1±0.12	7.8±0.14	8.3±0.71
Pld2	8.7±0.10	9.2±0.10	8.4±0.17	9.6±0.78
Ppp2ca	2.4±0.04	2.5±0.17	2.2±0.10	2.7±0.39
Ppp2r2b	13.8±0.44	14.4±0.36	15.3±0.92	13.5±0.23
Ppp2r4	6.6±0.12	7.2±0.15	6.1±0.13	7.5±0.78
Prkaa1	7.1±0.06	7.1±0.10	6.7±0.13	7.2±0.27
Prkaa2	4.73±0.08	4.9±0.13	4.4±0.13	5.0±0.52
Prkab1	6.3±0.06	6.7±0.13	6.1±0.03	6.9±0.49
Prkab2	7.0±0.06	7.3±0.15	6.5±0.12	7.6±0.72
Prkag1	6.9±0.09	7.4±0.09	6.6±0.22	7.6±0.42
Prkag2	5.9±0.02	6.3±0.11	5.7±0.19	6.5±0.24
Prkag3	10.7±0.16	11.2±0.34	10.5±0.11	11.2±0.92
Prkca	5.8±0.05	6.0±0.06	5.5±0.10	6.4±0.66
Prkcb	9.3±0.18	9.8±0.23	8.9±0.26	9.9±0.39
Prkcc	10.4±0.12	11.3±0.12	10.3±0.03	11.4±0.73
Prkce	6.8±0.09	7.3±0.27	6.5±0.16	7.7±0.79
Pten	3.0±0.04	3.1±0.10	2.8±0.08	3.2±0.34
Rheb	4.3±0.06	4.3±0.15	4.0±0.12	4.4±0.20
Rhoa	1.6±0.07	1.8±0.11	1.4±0.12	1.9±0.37
Rictor	7.3±0.07	7.5±0.12	7.0±0.16	7.8±0.70
Rps6	0.6±0.08	0.3±0.15	0.5±0.09	0.7±0.22
Rps6ka1	9.2±0.12	9.6±0.19	8.8±0.15	10.0±0.68
Rps6ka2	7.2±0.06	7.9±0.20	6.9±0.13	8.0±0.72
Rps6ka5	8.3±0.11	8.6±0.07	7.9±0.17	8.7±0.57
Rps6kb1	4.9±0.02	5.1±0.14	4.9±0.18	5.3±0.37
Rps6kb2	8.6±0.05	9.2±0.13	8.4±0.15	9.5±0.77
Rptor	6.9±0.05	7.5±0.16	6.7±0.20	7.8±0.78
Rraga	4.8±0.07	4.7±0.09	4.4±0.11	5.1±0.55
Rragb	8.7±0.07	9.0±0.03	8.4±0.03	8.9±0.17
Rragc	4.9±0.05	5.2±0.16	4.5±0.15	5.4±0.53
Rragd	4.9±0.09	5.2±0.16	4.4±0.10	5.2±0.44
Sgk1	3.3±0.11	3.9±0.43	3.4±0.23	4.4±0.17
Stk11	4.3±0.02	4.8±0.17	4.2±0.17	4.9±0.50
Stradb	5.0±0.11	5.1±0.11	4.8±0.14	5.0±0.12
Telo2	10.7±0.21	11.3±0.17	10.6±0.16	11.6±0.60

Trp53	8.5±0.20	8.7±0.07	8.1±0.16	9.0±0.40
Tsc1	9.4±0.02	9.6±0.20	8.9±0.18	9.9±0.86
Tsc2	4.8±0.02	5.3±0.12	5.0±0.15	4.8±0.16
Ulk1	6.1±0.01	6.5±0.24	5.7±0.16	6.9±0.94
Ulk2	5.0±0.06	5.4±0.12	4.8±0.20	5.5±0.65
Vegfa	3.5±0.08	3.9±0.30	3.2±0.03	4.2±0.51
Vegfb	3.0±0.04	3.4±0.13	2.6±0.04	3.9±0.76
Vegfc	9.8±0.14	10.1±0.18	9.5±0.25	10.5±0.63
Ywhaq	11.7±0.07	12.2±0.10	11.3±0.14	12.7±0.62
Actb	0.91±0.11	1.32±0.25	0.60±0.18	1.99±0.67

Cardiomyocytes were used for analysis of gene expression in an mTOR gene array.

Akt1, thymoma viral proto-oncogene 1; Akt1s1, AKT1 substrate 1; Akt2, thymoma viral proto-oncogene 2; Akt3, thymoma viral proto-oncogene 3; Cab39, calcium binding protein 39; Cab39l, calcium binding protein 39-like; Cdc42, cell division cycle 42; Chuk, conserved helix-loop-helix ubiquitous kinase; Ddit4, DNA-damage-inducible transcript 4; Ddit4l, DNA-damage-inducible transcript 4-like; Deptor, DEP domain containing MTOR-interacting protein; Eif4b, eukaryotic translation initiation factor 4B; Eif4e, eukaryotic translation initiation factor 4E; Eif4ebp1, eukaryotic translation initiation factor 4E binding protein 1; Eif4ebp2, eukaryotic translation initiation factor 4E binding protein 2; Fkbp1a, FK506 binding protein 1a; Fkbp8, FK506 binding protein 8; Gsk3b, glycogen synthase kinase 3 beta; Hif1a, hypoxia inducible factor 1, alpha subunit; Hras1, Harvey rat sarcoma virus oncogene 1; Hspa4, heat shock protein 4; Igf1, insulin-like growth factor 1; insulin-like growth factor binding protein 3; Ikbkb, inhibitor of kappaB kinase beta; Ilk, Integrin-linked kinase; Ins2, Insulin 2; Insr, insulin receptor; Irs1, insulin receptor substrate 1; Mapk1, mitogen-activated protein kinase 1; Mapk3, mitogen-activated protein kinase 3; Mapkap1, Mitogen-activated protein kinase associated protein; Mlst8, MTOR associated protein, LST8 homolog; Mtor, mechanistic target of rapamycin; Myo1c myosin IC; Pdpk1, 3-phosphoinositide dependent protein kinase 1; Pik3c3, phosphoinositide-3-kinase, class3; Pik3ca, phosphatidylinositol 3-kinase, catalytic, alpha polypeptide; Pik3cb, phosphatidylinositol 3-kinase, catalytic, beta polypeptide; Pik3cd, phosphatidylinositol 3-kinase, catalytic, delta polypeptide; Pik3cg, phosphatidylinositol 3-kinase, catalytic, gamma polypeptide; Pld1, phospholipase D1; Pld2, phospholipase D2; Ppp2ca, protein phosphatase 2 (formerly 2A), catalytic subunit, alpha isoform; Ppp2r2b, protein phosphatase 2, regulatory subunit B, beta; Ppp2r4, protein phosphatase 2A activator, regulatory subunit B; Prkaa1, protein kinase, AMP-activated, alpha 1 catalytic subunit; Prkaa2, protein kinase, AMP-activated, alpha 2 catalytic subunit; Prkab1, protein kinase, AMP-activated, beta 1 non-catalytic subunit; Prkab2, protein kinase, AMP-activated, beta 2 non-catalytic subunit; Prkag1, Protein kinase, AMP-activated, Gamma 1 non-catalytic subunit; Prkag2, Protein kinase, AMP-activated, Gamma 2 non-catalytic subunit; Prkag3, Protein kinase, AMP-activated, Gamma 3 non-catalytic subunit; Prkca, protein kinase C, alpha; Prkcb, protein kinase C, beta; Prkcc, protein kinase C, gamma; Prkce, protein kinase C, epsilon; Pten, phosphatase and tensin homolog; Rheb, Ras homolog enriched in brain; Rhoa, ras homolog gene family, member A; Rictor, RPTOR independent companion of MTOR, complex 2; Rps6, ribosomal protein S6; Rps6ka1, ribosomal protein S6 kinase polypeptide 1; Rps6ka2, ribosomal protein S6 kinase polypeptide

2; Rps6ka5, ribosomal protein S6 kinase, polypeptide 5, Rps6kb1, ribosomal protein S6 kinase polypeptide 1; Rps6kb2, ribosomal protein S6 kinase polypeptide 2; Rptor, regulatory associated protein of MTOR, complex 1; Rraga, Ras-related GTP binding A; Rragb, Ras-related GTP binding B; Rragc, Ras-related GTP binding C; Rragd, Ras-related GTP binding D; Sgk1, Serum/glucocorticoid regulated kinase 1; Stk11, serine/threonine kinase 11; Stradb, STE20-related kinase adaptor beta; Telo2, TEL2, telomere maintenance 2; Trp53, transformation related protein 53; Tsc1, Tuberous sclerosis 1; Tsc2, Tuberous sclerosis 2; Ulk1, unc-51 like kinase 1; Ulk2, unc-51 like kinase 1; Vegfa, vascular endothelial growth factor A; Vegfb, vascular endothelial growth factor B; Vegfc, vascular endothelial growth factor C; Ywhaq, Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, theta polypeptide; Actb, actin, beta.