**Appendix 2.** Primers for qPCR amplification of hepatic and white skeletal muscle genes.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Gene** | **Symbol** | **GenBank** | **Primer** | | **Amplification efficiency (%)**  **Liver Muscle** |
|  |  |  |  |  |  |
| Growth hormone receptor-type 1 | *ghr1* | AF438176 | F: ACC TGT CAG CCA CCA CAT GA | | 97 97 |
| R: TCG TGC AGA TCT GGG TCG TA | |  |
|  |  |  |  |  |  |
| Growth hormone receptor-type 2 | *ghr2* | AY573601 | F: GAG TGA ACC CGG CCT GAC AG | | 98 98 |
| R: GCG GTG GTA TCT GAT TCA TGG T | |  |
|  |  |  |  |  |  |
| Insulin-like growth factor 1 | *igf1* | AY996779 | F: TGT CTA GCG CTC TTT CCT TTC A | | 95 95 |
| R: AGA GGG TGT GGC TAC AGG AGA TAC | |  |
|  |  |  |  |  |  |
| Insulin-like growth factor 2 | *igf2* | AY996778 | F: TGG GAT CGT AGA GGA GTG TTG T | | 93 93 |
| R: CTG TAG AGA GGT GGC CGA CA | |  |
|  |  |  |  |  |  |
| Insulin-like binding-protein 1a | *igfbp1a* | KM522771 | F: ACA AAC CAA AAC AGT GCG AGT CCT C | | 98 |
| R: CCG TTC CAA GAG TTC ACA CAC CAG | |  |
|  |  |  |  |  |  |
| Insulin-like binding-protein 1b | *igfp1b* | MH577189 | F: GCC AAA CAG TGT GAG TCA TC | | 96 |
| R: ATC TTC TTC CCG TTC CAG G | |  |
|  |  |  |  |  |  |
| Insulin-like binding-protein 2a | *igfbp2a* | MH577190 | F: CCA GCA AAG AGA CCA CCT | | 97 |
| R: TCT TCA TCT CCT GCC TGT G | |  |
|  |  |  |  |  |  |
| Insulin-like binding-protein 2b | *igfbp2b* | AF377998 | F: AGC GAT GTG TCC TGA GAT AGT GAG | | 95 |
| R: GCA CCG TGG CGT GTA GAC C | |  |
|  |  |  |  |  |  |
| Insulin-like growth factor binding protein 3a | *igfbp3a* | MH577191 | F: ACA GGC GTG TGG AGT GTA | | 91 |
| R: TGG TGC TGG CAG GTC AAG | |  |
|  |  |  |  |  |  |
| Insulin-like binding-protein 4 | *Igfpb4* | KM658998 | F: GGC ATC AAA CAC CCG CAC AC | | 100 |
| R: ATC CAC GCA CCA GCA CTT CC | |  |
|  |  |  |  |  |  |
| Insulin-like growth factor binding protein 5a | *igfbp5a* | MH577193 | F: GAA TCT CAC GAT GAC GCC AT | | 96 |
| R: TGC TGA TGT GGT CTC TTC C | |  |
|  |  |  |  |  |  |
| Insulin-like growth factor binding protein 5b | *igfbp5b* | MH577194 | F: GCA AGC AGT GTA AGC CAT CTC | | 96 |
| R: TGA ACG CCG TAC TTG TCC A | |  |
|  |  |  |  |  |  |
| Insulin-like growth factor binding protein 6a | *igfbp6a* | MH577195 | F: CGA CCC GAA TCA CGA CAT ATA CAT | | 97 |
| R: ACT TGC CAC GCC GCT TAC | |  |
|  |  |  |  |  |  |
| Insulin-like growth factor binding protein 6b | *igfbp6b* | MH577196 | F: GAT TGC TCA CTG CGG ATC | | 97 |
| R: GGA GGG ACA GAC CTT GAA | |  |
|  |  |  |  |  |  |
| Insulin receptor | *insr* | KM522774 | F: ACG GAC AGC AAG AAG GCA GAG AAT C | | 91 |
| R: GGC TTC AAC GGT CGG ATC AGG T | |  |
|  |  |  |  |  |  |
| Insulin-like growth factor receptor 1a | *Igfr1a* | KJ591052 | F: TCA ACG ACA AGT ACG ACT ACC GCT GCT | | 97 |
| R: CAC ACT TTC TGG CAC TGG TTG GAG GTC | |  |
|  |  |  |  |  |  |
| Insulin-like growth factor receptor 2 | *igfr2* | KM522776 | F: ACA TTC GGG CAG CAC TCC TAA GAT | | 92 |
| R: CCA GTT CAC CTC GTA GCG ACA GTT | |  |
|  |  |  |  |  |  |
| Elongation of very long chain fatty acids 1 | *elovl1* | JX975700 | F: CCA GGG ACC ATA ATG TTG CC | | 98 |
| R: TAC ACA CCA CAG GGC TCT C | |  |
|  |  |  |  |  |  |
| Elongation of very long chain fatty acids 4 | *elovl4* | JX975701 | F: CGG TGG CAA TCA TCT TCC | | 94 |
| R: TCA ACT GGC TGT CTG TGT | |  |
|  |  |  |  |  |  |
| Elongation of very long chain fatty acids 5 | *elovl5* | AY660879 | F: CCT CCT GGT GCT CT ACA AT | | 96 |
| R: GTG AGT GTC CTG GCA GTA | |  |
|  |  |  |  |  |  |
| Elongation of very long chain fatty acids 6 | *elovl6* | JX975702 | F: GTG CTG CTC TAC TCC TGG TA | | 95 |
| R: ACG GCA TGG ACC AAG TAG T | |  |
|  |  |  |  |  |  |
| Fatty acid desaturase 2 | *fads2* | AY055749 | F: GCA GGC GGA GAG CGA CGG TCT GTT CC | | 97 |
| R: AGC AGG ATG TGA CCC AGG TGG AGG CAG AAG | |  |
|  |  |  |  |  |  |
| Stearoyl-CoA desaturase 1a | *scd1a* | JQ277703 | F: CGG AGG CGG AGG CGT TGG AGA AGA AG | | 92 |
| R: AGG GAG ACG GCG TAC AGG GCA CCT ATA TG | |  |
|  |  |  |  |  |  |
| Stearoyl-CoA desaturase 1b | *scd1b* | JQ277704 | F: GCT CAA TCT CAC CAC CGC CTT CAT AG | | 99 |
| R: GCT GCC GTC GCC CGT TCT CTG | |  |
|  |  |  |  |  |  |
| Hepatic lipase | *hl* | EU254479 | F: TTG TAG AAG GTG AGG AAA ACT G | | 94 |
| R: GCT CTC CAT CAG ACC ATC C | |  |
|  |  |  |  |  |  |
| Adipose triglyceride lipase | *atgl* | JX975711 | F: GTG CTT CAG TCC TGG ATG TCT TC | | 94 |
| R: AGC CTT GCA GGT CCA TGT TGA | |  |
|  |  |  |  |  |  |
| Lipoprotein lipase | *lpl* | AY495672 | F: CGT TGC CAA GTT TGT GAC CTG | | 98 |
| R: AGG GTG TTC TGG TTG TCT GC | |  |
|  |  |  |  |  |  |
| 85kDa calcium-independent phospholipase A2 | *pla2g6* | JX975708 | F: CGC CAA GGA ACT CGG AAA GAT GCT | | 95 |
| R: ACC GCA CAG CCA TCA GAG TCT | |  |
|  |  |  |  |  |  |
| Cholesterol 7-alpha-monooxygenase | *cyp7a1* | KX122017 | F: CCC TGC TAT TAA AGT CCC ACC TCT | | 97 |
| R: ATC GTA GGT AGG CTG GAG GAT TC | |  |
|  |  |  |  |  |  |
| Peroxisome proliferator-activated receptor α | *pparα* | AY590299 | F: TCT CTT CAG CCC ACC ATC CC | | 96 |
| R: ATC CCA GCG TGT CGT CTC C | |  |
|  |  |  |  |  |  |
| Peroxisome proliferator-activated receptor ß | *pparß* | AY590301 | F: AGG CGA GGG AGA GTG AGG ATG AGG AG | | 99 |
| R: CTG TTC TGA AAG CGA GGG TGA CGA TGT TTG | |  |
|  |  |  |  |  |  |
| Peroxisome proliferator-activated receptor γ | *ppar γ* | AY590304 | F: CGC CGT GGA CCT GTC AGA GC | | 93 |
| R: GGA ATG GAT GGA GGA GGA GGA GAT GG | |  |
|  |  |  |  |  |  |
| Carnitine palmitoyltransferase 1A | *cpt1a* | JQ308822 | F: GTG CCT TCG TTC GTT CCA TGA TC | | 91 91 |
| R: TGA TGC TTA TCT GCT GCC TGT TTG | |  |
|  |  |  |  |  |  |
| Fatty acid binding protein, heart | *h-fabp* | JQ308834 | F: CTG GGT GTG GGC TTC GCT AC | | 100 100 |
| R: CTC TGT GTT CTT GAT GGT GCT CTG | |  |
|  |  |  |  |  |  |
| Citrate synthase | *cs* | JX975229 | F: TCC AGG AGG TGA CGA GCC | | 95 95 |
| R: GTG ACC AGC AGC CAG AAG AG | |  |
|  |  |  |  |  |  |
| NADH-ubiquinone oxidoreductase chain 2 | *nd2* | KC217558 | F: TAG GTT GAA TGA CCA TCG TA | | 97 97 |
| R: GGC TAA GGA GTT GAG GTT | |  |
|  |  |  |  |  |  |
| NADH-ubiquinone oxidoreductase chain 5 | *nd5* | KC217559 | F: CCT AAA CGC CTG AGC CCT GG | | 97 97 |
| R: GCT GTA AAC GAG GTG GCT AGA AGG | |  |
|  |  |  |  |  |  |
| Cytochrome c oxidase subunit I | *cox-i* | KC217652 | F: GTC CTA CTT CTT CTG TCC CTT CCT GTT CT | | 91 91 |
| R: AGG TTT CGG TCT GTA AGG AGC ATT GTA ATC | |  |
|  |  |  |  |  |  |
| Cytochrome c oxidase subunit II | *cox-ii* | KC217653 | F: ACT GCC TAC ACA GGA CCT TGC C | | 95 95 |
| R: GTC TGC TTC CAG GAG ACG GAA TTG T | |  |
|  |  |  |  |  |  |
| Proliferator-activated receptor gamma coactivator 1 alpha | *pgc1α* | JX975264 | F: CGT GGG ACA GGT GTA ACC AGG ACT C | | 92 92 |
| R: ACC AAC CAA GGC AGC ACA CTC TAA TTC T | |  |
|  |  |  |  |  |  |
| Sirtuin 1 | *sirt1* | KF018666 | F: GGT TCC TAC AGT TTC ATC CAG CAG CAC ATC | | 97 97 |
| R: CCT CAG AAT GGT CCT CGG ATC GGT CTC | |  |
|  |  |  |  |  |  |
| Sirtuin 2 | *sirt2* | KF018667 | F: GAA CAA TCC GAC GAC AGC AGT GAA G | | 91 91 |
| R: AGG TTA CGC AGG AAG TCC ATC TCT | |  |
|  |  |  |  |  |  |
| Sirtuin5 | *sirt5* | KF018670 | F: CAG ACA TCC TAA CCC GAG CAG AG | | 98 98 |
| R: CCA CGA GGC AGA GGT CAC A | |  |
|  |  |  |  |  |  |
| Uncoupling protein 1 | *ucp1* | FJ710211 | F: GCA CAC TAC CCA ACA TCA CAA G | | 99 |
| R: CGC CGA ACG CAG AAA CAA AG | |  |
|  |  |  |  |  |  |
| Uncoupling protein 3 | *ucp3* | EU555336 | F: AGG TGC GAC TGG CTG ACG | | 99 |
| R: TTC GGC ATA CAA CCT CTC CAA AG | |  |
|  |  |  |  |  |  |
| Myoblast determination protein 1 | *myod1* | AF478568 | F: ATG GAG CTG TCG GAT ATC TCT TTC | | 96 |
| R: GAA GCA GGG GTC ATC GTA GAA ATC | |  |
|  |  |  |  |  |  |
| Myogenic factor MYOD2 | *myod2* | AF478569 | F: CCA ACT GCT CTG ATG GCA TGA TGG ATT TC | | 100 |
| R: GAC CGT TTG CTT CTC CTG GAC TCG TAT G | |  |
|  |  |  |  |  |  |
| Myogenic factor 5 | *myf5* | JN034420 | F: GCA TGG TTG ACA GCA ACA GTC CAG TGT | | 91 |
| R: TGT CTT ATC GCC CAA AGT GTC GTT CTT CAT | |  |
|  |  |  |  |  |  |
| Myogenic factor 6 | *myf6/mrf4/herculin* | JN034421 | F: GCA GCA ATG ACA AAC CAG AGA GAC GGA ACA | | 98 |
| R: GAG GCT GGA GGA CGC CGA AGA TTC A | |  |
|  |  |  |  |  |  |
| Myostatin/Growth differentiation factor 8 | *mstn/gdf-8* | AF258448 | F: AAG AGC AGA TCA TCT ACG GCA AGA TCC | | 96 |
| R: TCA AGA GCA TCC ACA ACG GTC TAC CA | |  |
|  |  |  |  |  |  |
| Follistatin | *fst* | AY544167 | F: GGA CCA GAC AAA CAA CGC ATA TTG | | 91 |
| R: CAT AGA TGA TCC CGT CGT TTC CAC | |  |
|  |  |  |  |  |  |
| Glutathione peroxidase 1 | *gpx1* | DQ524992 | F: GAA GGT GGA TGT GAA TGG AAA AGA TG | | 96 |
| R: CTG ACG GGA CTC CAA ATG ATG G | |  |
|  |  |  |  |  |  |
| Glutathione peroxidase 4 | *gpx4* | AM977818 | F: TGC GTC TGA TAG GGT CCA CTG TC | | 91 |
| R: GTC TGC CAG TCC TCT GTC GG | |  |
|  |  |  |  |  |  |
| Peroxiredoxin 3 | *prdx3* | GQ252681 | F: ATC AAC ACC CCA CGC AAG ACT G | | 91 |
| R: ACC GTT TGG ATC AAT GAG GAA CAG ACC | |  |
|  |  |  |  |  |  |
| Peroxiredoxin 5 | *prdx5* | GQ252683 | F: GAG CAC GGA ACA GAT GGC AAG G | | 91 |
| R: TCC ACA TTG ATC TTC TTC ACG ACT CC | |  |
|  |  |  |  |  |  |
| Superoxide dismutase [Cu-Zn] | *cu-zn-sod / sod1* | JQ308832 | F: TCA CGG ACA AGA TGC TCA CTC TC | | 92 |
| R: GGT TCT GCC AAT GAT GGA CAA GG | |  |
|  |  |  |  |  |  |
| Superoxide dismutase [Mn] | *mn-sod / sod2* | JQ308833 | F: CCT GAC CTG ACC TAC GAC TAT GG | | 93 |
| R: AGT GCC TCC TGA TAT TTC TCC TCT G | |  |
|  |  |  |  |  |  |
| Glucose-regulated protein, 170 kDa | *grp170* | JQ308821 | F: CAG AGG AGG CAG ACA GCA AGA C | | 91 |
| R: TTC TCA GAC TCA GCA TTT CCA GAT TTC | |  |
|  |  |  |  |  |  |
| Glucose-regulated protein, 94 kDa | *grp94* | JQ308820 | F: AAG GCA CAG GCT TAC CAG ACA G | | 96 |
| R: CTT CAG CAT CAT CGC CGA CTT TC | |  |
|  |  |  |  |  |  |
| Glucose-regulated protein, 75 kDa | *grp75* | DQ524993 | F: TCC GGT GTG GAT CTG ACC AAA GAC | | 99 |
| R: TGT TTA GGC CCA GAA GCA TCC ATG | |  |