Table S1: Genes in RetroFat chromosome 6 QTL interval (continued).

| Gene Symbol  | Gene Name  | Start<br>Location | Non-<br>synonymous<br>variants in<br>WKY founder† | Polyphen<br>prediction |
|--------------|--|-------------------|---|------------------------|
| Plb1         | phospholipase B1   | 25375699          |   |                        |
| LOC683819    | hypothetical protein   | 25565221          |   |                        |
| Fosl2        | FOS like 2, AP-1 transcription factor subunit                                    | 25598936          |   |                        |
| Babam2       | BRISC and BRCA1 A complex member 2   | 25666654          |   |                        |
| LOC103692569 | uncharacterized  | 25885973          |   |                        |
| Rbks         | ribokinase   | 26051568          | 26072561<br>T to A                                | benign                 |
| Mrpl33       | mitochondrial ribosomal protein L33  | 26130278          |   |                        |
| LOC102548914 | uncharacterized  | 26201017          |   |                        |
| Slc4a1ap     | solute carrier family 4 member 1 adaptor protein                                 | 26214083          |   |                        |
| Supt71       | SPT7-like STAGA complex gamma subunit  | 26241672          |   |                        |
| Gpn1*        | GPN-loop GTPase 1  | 26255081          |   |                        |
| RGD1560110   | similar to RIKEN cDNA 4930548H24   | 26278440          |   |                        |
| Zfp512       | zinc finger protein 512  | 26284749          |   |                        |
| LOC102556504 | titin-like   | 26322470          |   |                        |
| Gckr         | glucokinase regulator  | 26355296          |   |                        |
| LOC100910821 | uncharacterized  | 26387284          |   |                        |
| Ift172       | intraflagellar transport 172   | 26390686          |   |                        |
| LOC108351187 | uncharacterized  | 26407404          |   |                        |
| LOC108351186 | 60S ribosomal protein L37 pseudogene   | 26415619          |   |                        |
| LOC103692570 | dihydropyrimidinase-related protein 5-like                                       | 26423841          |   |                        |
| Krtcap3*     | keratinocyte associated protein 3  | 26485126          |   |                        |
| Nrbp1        | nuclear receptor binding protein 1   | 26486823          |   |                        |
| Ppm1g        | protein phosphatase, Mg2+/Mn2+ dependent, 1G                                     | 26517840          |   |                        |
| Zfp513       | zinc finger protein 513  | 26537707          |   |                        |
| Snx17        | sorting nexin 17   | 26541137          |   |                        |
| Eif2b4       | eukaryotic translation initiation factor 2B subunit delta                        | 26546917          |   |                        |
| Gtf3c2       | general transcription factor IIIC subunit 2                                      | 26560601          | 26581578<br>T to C                                | unknown                |
| Mpv17        | MpV17 mitochondrial inner membrane protein                                       | 26585713          |   |                        |
| Ucn          | urocortin  | 26602144          |   |                        |
| Trim54       | tripartite motif-containing 54   | 26603364          |   |                        |
| Dnajc5g      | DnaJ heat shock protein family (Hsp40) member C5 gamma                           | 26625526          |   |                        |
| Slc30a3*     | solute carrier family 30 member 3  | 26629752          |   |                        |
| Cad          | carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase | 26657507          |   |                        |
| Atraid*      | all-trans retinoic acid-induced differentiation factor                           | 26680628          |   |                        |
| Slc5a6       | solute carrier family 5 member 6   | 26685823          |   |                        |
| Tcf23        | transcription factor 23  | 26763159          |   |                        |

Table S1: Genes in RetroFat chromosome 6 QTL interval (continued).

| Gene Symbol  | Gene Name  | Start<br>Location | Non-<br>synonymous<br>variants in<br>WKY founder† | Polyphen prediction |       |                                      |          |                    |        |
|--------------|--|-------------------|---|---------------------|-------|--------------------------------------|----------|--------------------|--------|
|              |  |                   |   |                     | Prr30 | proline rich 30                      | 26780352 |                    |        |
|              |  |                   |   |                     | Preb  | prolactin regulatory element binding | 26784088 | 26786379<br>A to G | benign |
| Abhd1        | abhydrolase domain containing 1  | 26787807          |   |                     |       |                                      |          |                    |        |
| Cgref1       | cell growth regulator with EF hand domain 1  | 26797126          |   |                     |       |                                      |          |                    |        |
| Khk          | ketohexokinase   | 26810577          |   |                     |       |                                      |          |                    |        |
| Emilin1      | elastin microfibril interfacer 1   | 26821249          |   |                     |       |                                      |          |                    |        |
| LOC103692571 | uncharacterized  | 26833107          |   |                     |       |                                      |          |                    |        |
| Ost4         | oligosaccharyltransferase complex subunit 4, non-catalytic   | 26836216          |   |                     |       |                                      |          |                    |        |
| Agbl5        | ATP/GTP binding protein-like 5   | 26837299          |   |                     |       |                                      |          |                    |        |
| Trnaa-agc6   | transfer RNA alanine (anticodon AGC) 6   | 26856068          |   |                     |       |                                      |          |                    |        |
| Trnay-gua    | transfer RNA tyrosine (anticodon GUA)  | 26856459          |   |                     |       |                                      |          |                    |        |
| Trnay-gua3   | transfer RNA tyrosine (anticodon GUA) 3  | 26856459          |   |                     |       |                                      |          |                    |        |
| Tmem214      | transmembrane protein 214  | 26867638          |   |                     |       |                                      |          |                    |        |
| Mapre3       | microtubule-associated protein, RP/EB family, member 3   | 26878738          |   |                     |       |                                      |          |                    |        |
| LOC108351190 | uncharacterized  | 26890051          |   |                     |       |                                      |          |                    |        |
| LOC108351189 | uncharacterized  | 26918219          |   |                     |       |                                      |          |                    |        |
| LOC108351188 | 60S ribosomal protein L37 pseudogene   | 26931127          |   |                     |       |                                      |          |                    |        |
| Dpysl5       | dihydropyrimidinase-like 5   | 26939696          |   |                     |       |                                      |          |                    |        |
| LOC103692572 | uncharacterized  | 27069013          |   |                     |       |                                      |          |                    |        |
| Cenpa        | centromere protein A   | 27072259          |   |                     |       |                                      |          |                    |        |
| Slc35f6      | solute carrier family 35, member F6  | 27095144          |   |                     |       |                                      |          |                    |        |
| LOC103692573 | uncharacterized  | 27139210          |   |                     |       |                                      |          |                    |        |
| Kenk3        | potassium two pore domain channel subfamily K member 3   | 27154274          |   |                     |       |                                      |          |                    |        |
| Cib4         | calcium and integrin binding family member 4   | 27241804          |   |                     |       |                                      |          |                    |        |
| RGD1559683   | similar to RIKEN cDNA 1700001C02   | 27305402          |   |                     |       |                                      |          |                    |        |
| Otof         | otoferlin  | 27328343          |   |                     |       |                                      |          |                    |        |
| Drc1         | dynein regulatory complex subunit 1  | 27425237          | 27428501<br>G to A                                | benign              |       |                                      |          |                    |        |
| Selenoi      | selenoprotein I  | 27473748          |   |                     |       |                                      |          |                    |        |
| Adgrf3       | adhesion G protein-coupled receptor F3   | 27534525          |   |                     |       |                                      |          |                    |        |
| Hadhb        | hydroxyacyl-CoA dehydrogenase/3-ketoacyl-CoA thiolase/enoyl-CoA hydratase (trifunctional protein), beta subunit  | 27555408          |   |                     |       |                                      |          |                    |        |
| Hadha        | hydroxyacyl-CoA dehydrogenase/3-ketoacyl-CoA thiolase/enoyl-CoA hydratase (trifunctional protein), alpha subunit | 27589840          |   |                     |       |                                      |          |                    |        |
| Garem2       | GRB2 associated regulator of MAPK1 subtype 2   | 27631364          |   |                     |       |                                      |          |                    |        |
| LOC503104    | similar to retinoblastoma binding protein 4  | 27651115          |   |                     |       |                                      |          |                    |        |
| Rab10        | RAB10, member RAS oncogene family  | 27668387          |   |                     |       |                                      |          |                    |        |

Table S1: Genes in RetroFat chromosome 6 QTL interval (continued).

| Gene Symbol  | Gene Name   | Start<br>Location | Non-<br>synonymous<br>variants in<br>WKY founder† | Polyphen<br>prediction |
|--------------|---|-------------------|---|------------------------|
| Kif3c        | kinesin family member 3C  | 27768943          |   |                        |
| Asxl2        | additional sex combs like 2, transcriptional regulator              | 27835346          |   |                        |
| LOC108351319 | 28S ribosomal protein S21, mitochondrial pseudogene                 | 27856408          |   |                        |
| LOC103692577 | RNA pseudouridylate synthase domain-containing protein 4 pseudogene | 27875868          |   |                        |
| Dtnb         | dystrobrevin, beta  | 27975302          | 28004664<br>A to G                                | benign                 |
| LOC102556400 | transcription factor BTF3-like                                      | 28022498          |   |                        |
| LOC103692574 | uncharacterized   | 28034953          |   |                        |
| Dnmt3a       | DNA methyltransferase 3 alpha                                       | 28205375          |   |                        |
| LOC108351191 | 60S ribosomal protein L37 pseudogene                                | 28284681          |   |                        |
| LOC100911610 | dihydropyrimidinase-related protein 5-like                          | 28293250          |   |                        |
| RGD1565766   | hypothetical gene supported by BC088468; NM_001009712               | 28367389          |   |                        |
| Pomc         | proopiomelanocortin   | 28382937          |   |                        |
| Efr3b        | EFR3 homolog B  | 28390541          |   |                        |
| Dnajc27      | DnaJ heat shock protein family (Hsp40) member C27                   | 28515054          |   |                        |
| LOC108351192 | cytochrome c oxidase subunit 7B, mitochondrial pseudogene           | 28539158          |   |                        |
| LOC103692575 | cytochrome c oxidase subunit 7B, mitochondrial pseudogene           | 28539172          |   |                        |
| LOC689056    | similar to general transcription factor IIH, polypeptide 5          | 28556618          |   |                        |
| Adcy3        | adenylate cyclase 3   | 28570941          | 28572363<br>A to C                                | damaging               |
| Cenpo        | centromere protein O  | 28648804          |   |                        |
| Ptrhd1       | peptidyl-tRNA hydrolase domain containing 1                         | 28663602          |   |                        |
| Ncoa1        | nuclear receptor coactivator 1                                      | 28677563          |   |                        |
| LOC103692576 | uncharacterized   | 28812571          |   |                        |

Genes in bold are found within the most likely region of the QTL based on multi-SNP fine-mapping analysis. \*Full or partial mediators of RetroFat called by mediation analysis.

<sup>†</sup>RetroFat chromosome 6 haplotype effects: WKY has decreased fat pad weight (Figure 3D).