**ScienceHub Dataset for:**

**A-vdp5**

**Adverse maternal, fetal, and postnatal effects of hexafluoropropylene oxide dimer acid (GenX) from oral gestational exposure in Sprague Dawley rats**

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**Table S1.** **Identification of genes on custom array plate developed to identify genomic biomarkers of phthalated-induced male reproductive developmental toxicity in fetal rat testis.**

|  |  |  |
| --- | --- | --- |
| **Symbol** | **Description** | **GenBank** |
| Acox1 | Acyl-Coenzyme A oxidase 1, palmitoyl | NM\_017340 |
| Actb | Actin, beta | NM\_031144 |
| Acvr2b | Activin A receptor, type IIB | NM\_031554 |
| Adh1 | Alcohol dehydrogenase 1 (class I) | NM\_019286 |
| Aldh1a1 | Aldehyde dehydrogenase 1 family, member A1 | NM\_022407 |
| Amhr2 | Anti-Mullerian hormone receptor, type II | NM\_030998 |
| Apoa1 | Apolipoprotein A-I | NM\_012738 |
| Ar | Androgen receptor | NM\_012502 |
| Axin1 | Axin 1 | NM\_024405 |
| Axin2 | Axin2 | NM\_024355 |
| B2m | Beta-2 microglobulin | NM\_012512 |
| Cbx2 | Chromobox homolog 2 (Pc class homolog, Drosophila) | XM\_221185 |
| Cyp11a1 | Cytochrome P450, family 11, subfamily a, polypeptide 1 | NM\_017286 |
| Cyp11b1 | Cytochrome P450, subfamily 11B, polypeptide 1 | NM\_012537 |
| Cyp11b2 | Cytochrome P450, subfamily 11B, polypeptide 2 | NM\_012538 |
| Cyp17a1 | Cytochrome P450, family 17, subfamily a, polypeptide 1 | NM\_012753 |
| Cyp4a1 | Cytochrome P450, family 4, subfamily a, polypeptide 1 | NM\_175837 |
| Dhcr7 | 7-dehydrocholesterol reductase | NM\_022389 |
| Dhh | Desert hedgehog homolog (Drosophila) | XM\_343327 |
| Dixdc1 | DIX domain containing 1 | NM\_001037654 |
| Dkk1 | Dickkopf homolog 1 (Xenopus laevis) | XM\_219804 |
| Dkk3 | Dickkopf homolog 3 (Xenopus laevis) | NM\_138519 |
| Dmrt1 | Doublesex and mab-3 related transcription factor 1 | NM\_053706 |
| Dmrt2 | Doublesex and mab-3 related transcription factor 2 | XM\_219927 |
| Dvl1 | Dishevelled, dsh homolog 1 (Drosophila) | NM\_031820 |
| Dvl2 | Dishevelled 2, dsh homolog (Drosophila) | XM\_239254 |
| Dvl3 | Dishevelled, dsh homolog 3 (Drosophila) | XM\_221304 |
| Emx2 | Empty spiracles homeobox 2 | XM\_574698 |
| Esr1 | Estrogen receptor 1 | NM\_012689 |
| Esr2 | Estrogen receptor 2 (ER beta) | NM\_012754 |
| Fabp1 | Fatty acid binding protein 1, liver | NM\_012556 |
| Fgf8 | Fibroblast growth factor 8 | NM\_133286 |
| Fgf9 | Fibroblast growth factor 9 | NM\_012952 |
| Gata4 | GATA binding protein 4 | NM\_144730 |
| Gusb | Glucuronidase, beta | NM\_017015 |
| Hoxa2 | Homeo box A2 | NM\_012581 |
| Hsd17b3 | Hydroxysteroid (17-beta) dehydrogenase 3 | NM\_054007 |
| Hsd3b | 3 beta-hydroxysteroid dehydrogenase/delta-5-delta-4 isomerase type II | NM\_001042619 |
| Inha | Inhibin alpha | NM\_012590 |
| Inhba | Inhibin beta-A | NM\_017128 |
| Inhbb | Inhibin beta-B | XM\_344130 |
| Insl3 | Insulin-like 3 | NM\_053680 |
| Ldha | Lactate dehydrogenase A | NM\_017025 |
| Lhcgr | Luteinizing hormone/choriogonadotropin receptor | NM\_012978 |
| Lhx1 | LIM homeobox 1 | NM\_145880 |
| Lhx9 | LIM homeobox 9 | NM\_181367 |
| LOC691504 | Similar to Zinc finger protein ZFPM1 (Zinc finger protein multitype 1) (Friend of GATA protein 1) (Friend of GATA-1) (FOG-1) | XR\_007127 |
| Mapk3 | Mitogen activated protein kinase 3 | NM\_017347 |
| Nr0b1 | Nuclear receptor subfamily 0, group B, member 1 | NM\_053317 |
| Nr1d1 | Nuclear receptor subfamily 1, group D, member 1 | NM\_145775 |
| Nr3c1 | Nuclear receptor subfamily 3, group C, member 1 | NM\_012576 |
| Nr3c2 | Nuclear receptor subfamily 3, group C, member 2 | NM\_013131 |
| Nr4a2 | Nuclear receptor subfamily 4, group A, member 2 | NM\_019328 |
| Nr5a1 | Nuclear receptor subfamily 5, group A, member 1 | XM\_001054966 |
| Ntf3 | Neurotrophin 3 | NM\_031073 |
| Ntrk3 | Neurotrophic tyrosine kinase, receptor, type 3 | NM\_019248 |
| Pcaf | P300/CBP-associated factor | NM\_001024252 |
| Pdgfa | Platelet-derived growth factor alpha polypeptide | NM\_012801 |
| Pdgfra | Platelet derived growth factor receptor, alpha polypeptide | XM\_214030 |
| Pou5f1 | POU class 5 homeobox 1 | NM\_001009178 |
| Ppara | Peroxisome proliferator activated receptor alpha | NM\_013196 |
| Ppard | Peroxisome proliferator-activated receptor delta | NM\_013141 |
| Pparg | Peroxisome proliferator-activated receptor gamma | NM\_013124 |
| PPC | Positive PCR Control | SA\_00103 |
| Ptch1 | Patched homolog 1 (Drosophila) | XM\_345570 |
| Ptgds2 | Prostaglandin D2 synthase 2, hematopoietic | NM\_031644 |
| Rara | Retinoic acid receptor, alpha | NM\_031528 |
| Rarb | Retinoic acid receptor, beta | XM\_223843 |
| Rarg\_mapped | Retinoic acid receptor, gamma (mapped) | XM\_217064 |
| RGD1563046 | Similar to cerberus-like | XR\_008686 |
| RGDC | Rat Genomic DNA Contamination | U26919 |
| Rhox10 | Reproductive homeobox 10 | NM\_001037581 |
| Rhox5 | Reproductive homeobox 5 | NM\_022175 |
| RTC | Reverse Transcription Control | SA\_00104 |
| Rxra | Retinoid X receptor alpha | NM\_012805 |
| Rxrb | Retinoid X receptor beta | NM\_206849 |
| Rxrg | Retinoid X receptor gamma | NM\_031765 |
| Scarb1 | Scavenger receptor class B, member 1 | NM\_031541 |
| Sfrp1 | Secreted frizzled-related protein 1 | XM\_224987 |
| Sfrp2 | Secreted frizzled-related protein 2 | XM\_227314 |
| Sfrp4 | Secreted frizzled-related protein 4 | NM\_053544 |
| Sfrp5 | Secreted frizzled-related protein 5 | XM\_219887 |
| Smo | Smoothened homolog (Drosophila) | NM\_012807 |
| Sox8 | SRY (sex determining region Y)-box 8 | XM\_220283 |
| Sox9 | SRY-box containing gene 9 | XM\_343981 |
| Sra1 | Steroid receptor RNA activator 1 | NM\_183329 |
| Sry | Sex determining region Y | NM\_012772 |
| Star | Steroidogenic acute regulatory protein | NM\_031558 |
| Tgfb1 | Transforming growth factor, beta 1 | NM\_021578 |
| Tle1 | Transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila) | XM\_342851 |
| Tle2 | Transducin-like enhancer of split 2 (E(sp1) homolog, Drosophila) | NM\_001039013 |
| Tspo | Translocator protein | NM\_012515 |
| Vdr | Vitamin D (1,25- dihydroxyvitamin D3) receptor | NM\_017058 |
| Wnt7a | Wingless-type MMTV integration site family, member 7A | XM\_342723 |
| Wt1 | Wilms tumor 1 | NM\_031534 |
| Zfpm2 | Zinc finger protein, multitype 2 | XM\_235253 |

**Table S2. Identification of PPAR pathway genes analyzed in maternal and fetal livers using Qiagen RT2 Profiler PCR Array Rat PPAR Targets (Cat no. PARN-149Z)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Symbol** | **Description** | **UniGene** | **GenBank** |
| Acaa2 | Acetyl-Coenzyme A acyltransferase 2 | Rn.3786 | NM\_130433 |
| Acadl | Acyl-Coenzyme A dehydrogenase, long-chain | Rn.174 | NM\_012819 |
| Acadm | Acyl-Coenzyme A dehydrogenase, C-4 to C-12 straight chain | Rn.6302 | NM\_016986 |
| Acox1 | Acyl-Coenzyme A oxidase 1, palmitoyl | Rn.31796 | NM\_017340 |
| Acox3 | Acyl-Coenzyme A oxidase 3, pristanoyl | Rn.10546 | NM\_053339 |
| Acsl1 | Acyl-CoA synthetase long-chain family member 1 | Rn.6215 | NM\_012820 |
| Acsl3 | Acyl-CoA synthetase long-chain family member 3 | Rn.54820 | NM\_057107 |
| Acsl4 | Acyl-CoA synthetase long-chain family member 4 | Rn.87821 | NM\_053623 |
| Acsl5 | Acyl-CoA synthetase long-chain family member 5 | Rn.105862 | NM\_053607 |
| Adipoq | Adiponectin, C1Q and collagen domain containing | Rn.24299 | NM\_144744 |
| Angptl4 | Angiopoietin-like 4 | Rn.119611 | NM\_199115 |
| Apoa1 | Apolipoprotein A-I | Rn.10308 | NM\_012738 |
| Apoa5 | Apolipoprotein A-V | Rn.48763 | NM\_080576 |
| Apoc3 | Apolipoprotein C-III | Rn.195323 | NM\_012501 |
| Apoe | Apolipoprotein E | Rn.32351 | NM\_138828 |
| Aqp7 | Aquaporin 7 | Rn.11111 | NM\_019157 |
| Cd36 | CD36 molecule (thrombospondin receptor) | Rn.102418 | NM\_031561 |
| Clu | Clusterin | Rn.1780 | NM\_053021 |
| Cpt1a | Carnitine palmitoyltransferase 1a, liver | Rn.2856 | NM\_031559 |
| Cpt1b | Carnitine palmitoyltransferase 1b, muscle | Rn.6028 | NM\_013200 |
| Cpt2 | Carnitine palmitoyltransferase 2 | Rn.11389 | NM\_012930 |
| Creb1 | CAMP responsive element binding protein 1 | Rn.90061 | NM\_031017 |
| Crebbp | CREB binding protein | Rn.108128 | NM\_133381 |
| Cyp27a1 | Cytochrome P450, family 27, subfamily a, polypeptide 1 | Rn.94956 | NM\_178847 |
| Cyp7a1 | Cytochrome P450, family 7, subfamily a, polypeptide 1 | Rn.10737 | NM\_012942 |
| Dgat1 | Diacylglycerol O-acyltransferase homolog 1 (mouse) | Rn.252 | NM\_053437 |
| Ech1 | Enoyl coenzyme A hydratase 1, peroxisomal | Rn.6148 | NM\_022594 |
| Ehhadh | Enoyl-Coenzyme A, hydratase/3-hydroxyacyl Coenzyme A dehydrogenase | Rn.3671 | NM\_133606 |
| Eln | Elastin | Rn.54384 | NM\_012722 |
| Ep300 | E1A binding protein p300 | Rn.12447 | XM\_576312 |
| Etfdh | Electron-transferring-flavoprotein dehydrogenase | Rn.37277 | NM\_198742 |
| Fabp1 | Fatty acid binding protein 1, liver | Rn.36412 | NM\_012556 |
| Fabp2 | Fatty acid binding protein 2, intestinal | Rn.91358 | NM\_013068 |
| Fabp3 | Fatty acid binding protein 3, muscle and heart | Rn.32566 | NM\_024162 |
| Fabp4 | Fatty acid binding protein 4, adipocyte | Rn.4258 | NM\_053365 |
| Fabp5 | Fatty acid binding protein 5, epidermal | Rn.98269 | NM\_145878 |
| Fabp6 | Fatty acid binding protein 6, ileal | Rn.10008 | NM\_017098 |
| Fabp7 | Fatty acid binding protein 7, brain | Rn.10014 | NM\_030832 |
| Fads2 | Fatty acid desaturase 2 | Rn.162483 | NM\_031344 |
| Fgr | Gardner-Rasheed feline sarcoma viral (v-fgr) oncogene homolog | Rn.11309 | NM\_024145 |
| Gk | Glycerol kinase | Rn.153497 | NM\_024381 |
| Hif1a | Hypoxia-inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor) | Rn.10852 | NM\_024359 |
| Hmgcs2 | 3-hydroxy-3-methylglutaryl-Coenzyme A synthase 2 (mitochondrial) | Rn.29594 | NM\_173094 |
| Hspd1 | Heat shock protein 1 (chaperonin) | Rn.102058 | NM\_022229 |
| Ilk | Integrin-linked kinase | Rn.95042 | NM\_133409 |
| Klf10 | Kruppel-like factor 10 | Rn.2398 | NM\_031135 |
| Lpin1 | Lipin 1 | Rn.214286 | NM\_001012111 |
| Lpl | Lipoprotein lipase | Rn.3834 | NM\_012598 |
| Med1 | Mediator complex subunit 1 | Rn.4262 | NM\_001134361 |
| Mlycd | Malonyl-CoA decarboxylase | Rn.13468 | NM\_053477 |
| Mmp9 | Matrix metallopeptidase 9 | Rn.10209 | NM\_031055 |
| Ncoa3 | Nuclear receptor coactivator 3 | Rn.20691 | XM\_215947 |
| Ncoa6 | Nuclear receptor coactivator 6 | Rn.9077 | XM\_342552 |
| Nr1h3 | Nuclear receptor subfamily 1, group H, member 3 | Rn.11209 | NM\_031627 |
| Olr1 | Oxidized low density lipoprotein (lectin-like) receptor 1 | Rn.87449 | NM\_133306 |
| Pck1 | Phosphoenolpyruvate carboxykinase 1 (soluble) | Rn.104376 | NM\_198780 |
| Pck2 | Phosphoenolpyruvate carboxykinase 2 (mitochondrial) | Rn.35508 | NM\_001108377 |
| Pdpk1 | 3-phosphoinositide dependent protein kinase-1 | Rn.10905 | NM\_031081 |
| Pltp | Phospholipid transfer protein | Rn.117434 | NM\_001168543 |
| Ppara | Peroxisome proliferator activated receptor alpha | Rn.9753 | NM\_013196 |
| Ppard | Peroxisome proliferator-activated receptor delta | Rn.96181 | NM\_013141 |
| Pparg | Peroxisome proliferator-activated receptor gamma | Rn.23443 | NM\_013124 |
| Ppargc1a | Peroxisome proliferator-activated receptor gamma, coactivator 1 alpha | Rn.19172 | NM\_031347 |
| Ppargc1b | Peroxisome proliferator-activated receptor gamma, coactivator 1 beta | Rn.163382 | NM\_176075 |
| Pprc1 | Peroxisome proliferator-activated receptor gamma, coactivator-related 1 | Rn.9484 | NM\_001106363 |
| Pten | Phosphatase and tensin homolog | Rn.22158 | NM\_031606 |
| Pyy | Peptide YY (mapped) | Rn.13173 | NM\_001034080 |
| Rxra | Retinoid X receptor alpha | Rn.108206 | NM\_012805 |
| Rxrb | Retinoid X receptor beta | Rn.49295 | NM\_206849 |
| Rxrg | Retinoid X receptor gamma | Rn.40816 | NM\_031765 |
| Scd1 | Stearoyl-Coenzyme A desaturase 1 | Rn.1023 | NM\_139192 |
| Sirt1 | Sirtuin (silent mating type information regulation 2 homolog) 1 (S. cerevisiae) | Rn.219976 | NM\_001107627 |
| Slc22a5 | Solute carrier family 22 (organic cation/carnitine transporter), member 5 | Rn.8844 | NM\_019269 |
| Slc27a1 | Solute carrier family 27 (fatty acid transporter), member 1 | Rn.1047 | NM\_053580 |
| Slc27a2 | Solute carrier family 27 (fatty acid transporter), member 2 | Rn.3608 | NM\_031736 |
| Slc27a4 | Solute carrier family 27 (fatty acid transporter), member 4 | Rn.145068 | XM\_231115 |
| Slc27a5 | Solute carrier family 27 (fatty acid transporter), member 5 | Rn.207896 | NM\_024143 |
| Slc27a6 | Solute carrier family 27 (fatty acid transporter), member 6 | Rn.53815 | NM\_001106145 |
| Smarcd3 | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 3 | Rn.20043 | NM\_001011966 |
| Sorbs1 | Sorbin and SH3 domain containing 1 | Rn.110441 | XM\_001066536 |
| Src | V-src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (avian) | Rn.112600 | NM\_031977 |
| Tgs1 | Trimethylguanosine synthase homolog (S. cerevisiae) | Rn.48378 | NM\_001107904 |
| Txnip | Thioredoxin interacting protein | Rn.2758 | NM\_001008767 |
| Ucp1 | Uncoupling protein 1 (mitochondrial, proton carrier) | Rn.10281 | NM\_012682 |
| Actb | Actin, beta | Rn.94978 | NM\_031144 |
| B2m | Beta-2 microglobulin | Rn.1868 | NM\_012512 |
| Hprt1 | Hypoxanthine phosphoribosyltransferase 1 | Rn.47 | NM\_012583 |
| Ldha | Lactate dehydrogenase A | Rn.107896 | NM\_017025 |
| Rplp1 | Ribosomal protein, large, P1 | Rn.973 | NM\_001007604 |
| RGDC | Rat Genomic DNA Contamination | N/A | U26919 |
| RTC | Reverse Transcription Control | N/A | SA\_00104 |
| PPC | Positive PCR Control | N/A | SA\_00103 |

PPAR=peroxisome proliferator activated receptor; PCR=polymerase chain reaction

**Table S3**. **Fetal liver (collected GD18) PPAR gene expression following GD14-18 maternal oral exposure to HFPO-DA.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene** | **HFPO-DA dose (mg/kg/d)** | | | | | | | | |
|  | **0** | **1** | **3** | **10** | **30** | **62.5** | **125** | **250** | **500** |
| Acaa2 | 1.0 ± 0.0 (6) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.8 ± 0.1 (3) | 2.3 ± 0.2 (3) | 2.5 ± 0.2 (3) | 3.2 ± 0.2 (3) | 3.3 ± 0.0 (3) | 3.4 ± 0.2 (3) |
| Acadl | 1.0 ± 0.0 (6) | 1.0 ± 0.0 (3) | 1.1 ± 0.0 (3) | 1.3 ± 0.0 (3) | 1.4 ± 0.0 (3) | 1.5 ± 0.1 (3) | 1.9 ± 0.1 (3) | 2.0 ± 0.0 (3) | 2.2 ± 0.1 (3) |
| Acadm | 1.0 ± 0.0 (6) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.4 ± 0.0 (3) | 1.7 ± 0.0 (3) | 1.9 ± 0.0 (3) | 2.4 ± 0.1 (3) | 2.3 ± 0.1 (3) | 2.5 ± 0.2 (3) |
| Acox1 | 1.0 ± 0.0 (6) | 1.2 ± 0.0 (3) | 1.5 ± 0.0 (3) | 2.3 ± 0.2 (3) | 3.7 ± 0.1 (3) | 5.7 ± 0.4 (3) | 8.3 ± 0.3 (3) | 8.5 ± 0.6 (3) | 9.2 ± 0.8 (3) |
| Acox3 | 1.0 ± 0.0 (6) | 1.1 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.2 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.1 (3) |
| Acsl1 | 1.0 ± 0.0 (6) | 1.1 ± 0.0 (3) | 1.3 ± 0.1 (3) | 1.8 ± 0.1 (3) | 2.4 ± 0.0 (3) | 2.5 ± 0.1 (3) | 2.9 ± 0.0 (3) | 2.7 ± 0.1 (3) | 2.8 ± 0.2 (3) |
| Acsl3 | 1.0 ± 0.0 (6) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.3 ± 0.1 (3) | 1.4 ± 0.0 (3) | 1.5 ± 0.0 (3) | 1.5 ± 0.1 (3) |
| Acsl4 | 1.0 ± 0.0 (6) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.5 ± 0.0 (3) | 1.6 ± 0.1 (3) | 1.7 ± 0.0 (3) | 1.7 ± 0.1 (3) | 1.7 ± 0.1 (3) |
| Acsl5 | 1.0 ± 0.0 (6) | 0.8 ± 0.0 (3) | 0.8 ± 0.1 (3) | 0.9 ± 0.0 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.1 (3) |
| Adipoq | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Angptl4 | 1.0 ± 0.1 (6) | 1.6 ± 0.2 (3) | 3.8 ± 0.4 (3) | 6.2 ± 0.7 (3) | 11.3 ± 0.6 (3) | 17.0 ± 0.4 (3) | 19.5 ± 0.2 (3) | 17.3 ± 1.0 (3) | 17.0 ± 2.0 (3) |
| Apoa1 | 1.0 ± 0.0 (6) | 1.1 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.1 ± 0.0 (3) | 0.9 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.5 ± 0.1 (3) |
| Apoa5 | 1.0 ± 0.1 (6) | 1.4 ± 0.1 (3) | 1.3 ± 0.4 (3) | 1.4 ± 0.0 (3) | 1.5 ± 0.1 (3) | 1.3 ± 0.4 (3) | 1.6 ± 0.2 (3) | 1.0 ± 0.2 (3) | 1.3 ± 0.2 (3) |
| Apoc3 | 1.0 ± 0.1 (6) | 1.2 ± 0.2 (3) | 1.4 ± 0.3 (3) | 1.3 ± 0.3 (3) | 1.0 ± 0.2 (3) | 1.1 ± 0.3 (3) | 1.3 ± 0.3 (3) | 0.9 ± 0.1 (3) | 1.3 ± 0.2 (3) |
| Apoe | 1.0 ± 0.0 (6) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.1 (3) |
| Aqp7 | 1.0 ± 0.0 (6) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.5 ± 0.1 (3) | 1.6 ± 0.0 (3) | 1.7 ± 0.1 (3) | 1.6 ± 0.2 (3) | 1.8 ± 0.0 (3) |
| Cd36 | 1.0 ± 0.0 (6) | 0.8 ± 0.1 (3) | 0.8 ± 0.2 (3) | 0.8 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.8 ± 0.1 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.0 (3) |
| Clu | 1.0 ± 0.1 (6) | 1.1 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.4 ± 0.0 (3) | 1.3 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.2 ± 0.2 (3) |
| Cpt1a | 1.0 ± 0.1 (6) | 1.3 ± 0.1 (3) | 2.0 ± 0.1 (3) | 3.4 ± 0.5 (3) | 4.6 ± 0.1 (3) | 6.2 ± 0.4 (3) | 9.7 ± 1.8 (3) | 11.2 ± 1.7 (3) | 9.9 ± 1.5 (3) |
| Cpt1b | 1.0 ± 0.1 (6) | 1.7 ± 0.4 (3) | 3.0 ± 0.4 (3) | 3.5 ± 0.4 (3) | 8.6 ± 0.8 (3) | 10.3 ± 0.3 (3) | 16.7 ± 0.4 (3) | 16.4 ± 0.9 (3) | 21.2 ± 1.9 (3) |
| Cpt2 | 1.0 ± 0.0 (6) | 1.2 ± 0.1 (3) | 1.4 ± 0.1 (3) | 2.1 ± 0.2 (3) | 2.9 ± 0.1 (3) | 3.2 ± 0.1 (3) | 4.1 ± 0.1 (3) | 4.0 ± 0.2 (3) | 4.3 ± 0.4 (3) |
| Creb1 | 1.0 ± 0.0 (6) | 1.0 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.9 ± 0.0 (3) |
| Crebbp | 1.0 ± 0.0 (6) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.1 (3) |
| Cyp27a1 | 1.0 ± 0.0 (6) | 1.1 ± 0.1 (3) | 1.1 ± 0.2 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.1 (3) |
| Cyp7a1 | 1.0 ± 0.2 (6) | 1.3 ± 0.3 (3) | 0.9 ± 0.1 (3) | 1.6 ± 0.7 (3) | 1.1 ± 0.4 (3) | 0.4 ± 0.0 (3) | 0.5 ± 0.0 (3) | 0.6 ± 0.2 (3) | 0.6 ± 0.1 (3) |
| Dgat1 | 1.0 ± 0.0 (6) | 1.1 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.4 ± 0.0 (3) | 1.5 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.5 ± 0.1 (3) | 1.5 ± 0.1 (3) | 1.5 ± 0.0 (3) |
| Ech1 | 1.0 ± 0.0 (6) | 1.1 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.5 ± 0.2 (3) | 2.1 ± 0.1 (3) | 2.6 ± 0.2 (3) | 4.6 ± 0.4 (3) | 4.3 ± 0.4 (3) | 6.5 ± 1.0 (3) |
| Ehhadh | 1.0 ± 0.1 (6) | 1.6 ± 0.2 (3) | 4.6 ± 0.4 (3) | 30.5 ± 12.2 (3) | 81.2 ± 9.6 (3) | 144.8 ± 15.1 (3) | 214.8 ± 7.5 (3) | 252.3 ± 31.6 (3) | 321.0 ± 33.8 (3) |
| Eln | 1.0 ± 0.1 (6) | 1.2 ± 0.3 (3) | 1.6 ± 0.3 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.3 (3) | 1.3 ± 0.0 (3) | 1.1 ± 0.2 (3) | 1.5 ± 0.1 (3) | 1.4 ± 0.3 (3) |
| Ep300 | 1.0 ± 0.0 (6) | 1.0 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.0 (3) | 0.9 ± 0.0 (3) |
| Etfdh | 1.0 ± 0.1 (6) | 1.0 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.7 ± 0.1 (3) | 2.1 ± 0.1 (3) | 2.7 ± 0.1 (3) | 3.5 ± 0.2 (3) | 3.6 ± 0.2 (3) | 4.1 ± 0.3 (3) |
| Fabp1 | 1.0 ± 0.1 (6) | 1.8 ± 0.5 (3) | 3.3 ± 0.7 (3) | 10.9 ± 2.6 (3) | 28.3 ± 0.5 (3) | 56.6 ± 0.8 (3) | 77.8 ± 3.5 (3) | 88.3 ± 4.0 (3) | 105.3 ± 8.0 (3) |
| Fabp2 | 1.0 ± 0.1 (6) | 0.9 ± 0.2 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.7 ± 0.0 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.2 (3) |
| Fabp3 | 1.0 ± 0.1 (6) | 1.0 ± 0.0 (3) | 1.2 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 0.8 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.1 (3) |
| Fabp4 | 1.0 ± 0.1 (6) | 1.4 ± 0.2 (3) | 1.5 ± 0.0 (3) | 1.2 ± 0.1 (3) | 1.2 ± 0.0 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.5 ± 0.2 (3) |
| Fabp5 | 1.0 ± 0.0 (6) | 1.1 ± 0.2 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.4 ± 0.0 (3) | 1.5 ± 0.1 (3) | 1.8 ± 0.2 (3) |
| Fabp6 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Fabp7 | 1.0 ± 0.1 (6) | 1.0 ± 0.2 (3) | 1.0 ± 0.0 (3) | 1.3 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.3 ± 0.2 (3) | 1.8 ± 0.3 (3) | 1.8 ± 0.2 (3) | 1.9 ± 0.3 (3) |
| Fads2 | 1.0 ± 0.0 (6) | 1.1 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.6 ± 0.1 (3) | 1.8 ± 0.1 (3) | 2.0 ± 0.2 (3) | 2.2 ± 0.0 (3) | 2.1 ± 0.0 (3) |
| Fgr | 1.0 ± 0.0 (6) | 0.9 ± 0.1 (3) | 1.3 ± 0.2 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.2 (3) | 0.9 ± 0.1 (3) | 1.1 ± 0.2 (3) | 0.9 ± 0.2 (3) | 0.8 ± 0.2 (3) |
| Gk | 1.0 ± 0.1 (6) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.4 ± 0.2 (3) | 1.9 ± 0.1 (3) | 1.7 ± 0.0 (3) | 2.0 ± 0.2 (3) |
| Hif1a | 1.0 ± 0.0 (6) | 1.0 ± 0.0 (3) | 1.1 ± 0.0 (3) | 1.2 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.1 (3) |
| Hmgcs2 | 1.0 ± 0.0 (6) | 0.7 ± 0.3 (3) | 2.9 ± 0.4 (3) | 4.6 ± 0.7 (3) | 8.0 ± 0.1 (3) | 16.7 ± 0.1 (3) | 20.9 ± 0.4 (3) | 22.0 ± 0.1 (3) | 22.7 ± 2.0 (3) |
| Hspd1 | 1.0 ± 0.0 (6) | 1.1 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.3 ± 0.2 (3) |
| Ilk | 1.0 ± 0.0 (6) | 1.0 ± 0.0 (3) | 1.2 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) |
| Klf10 | 1.0 ± 0.0 (6) | 1.0 ± 0.2 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.5 ± 0.2 (3) | 1.7 ± 0.1 (3) | 1.6 ± 0.0 (3) | 1.4 ± 0.2 (3) |
| Lpin1 | 1.0 ± 0.0 (6) | 1.0 ± 0.2 (3) | 1.2 ± 0.3 (3) | 0.8 ± 0.0 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.2 ± 0.0 (3) | 1.3 ± 0.2 (3) |
| Lpl | 1.0 ± 0.0 (6) | 1.0 ± 0.0 (3) | 1.1 ± 0.0 (3) | 1.2 ± 0.0 (3) | 1.4 ± 0.2 (3) | 1.3 ± 0.0 (3) | 1.5 ± 0.0 (3) | 1.5 ± 0.0 (3) | 1.4 ± 0.1 (3) |
| Med1 | 1.0 ± 0.1 (6) | 1.0 ± 0.0 (3) | 1.1 ± 0.0 (3) | 1.1 ± 0.0 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.1 (3) |
| Mlycd | 1.0 ± 0.1 (6) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.4 ± 0.1 (3) | 2.3 ± 0.1 (3) | 2.6 ± 0.2 (3) | 2.4 ± 0.2 (3) | 2.1 ± 0.1 (3) |
| Mmp9 | 1.0 ± 0.1 (6) | 1.2 ± 0.2 (3) | 1.5 ± 0.3 (3) | 1.0 ± 0.2 (3) | 1.2 ± 0.3 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.2 (3) | 0.9 ± 0.2 (3) |
| Ncoa3 | 1.0 ± 0.0 (6) | 1.0 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.0 (3) |
| Ncoa6 | 1.0 ± 0.0 (6) | 1.0 ± 0.0 (3) | 1.1 ± 0.0 (3) | 0.9 ± 0.2 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) | 0.9 ± 0.1 (3) |
| Nr1h3 | 1.0 ± 0.1 (6) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.0 ± 0.0 (3) |
| Olr1 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Pck1 | 1.0 ± 0.1 (6) | 1.5 ± 0.2 (3) | 1.6 ± 0.3 (3) | 3.0 ± 1.2 (3) | 4.4 ± 1.5 (3) | 6.6 ± 1.6 (3) | 11.8 ± 3.3 (3) | 8.8 ± 1.7 (3) | 26.6 ± 13.4 (3) |
| Pck2 | 1.0 ± 0.0 (6) | 0.9 ± 0.1 (3) | 1.1 ± 0.0 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.0 (3) |
| Pdpk1 | 1.0 ± 0.0 (6) | 0.9 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.0 (3) | 0.8 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.0 (3) |
| Pltp | 1.0 ± 0.1 (6) | 1.0 ± 0.2 (3) | 1.5 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.4 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.2 (3) |
| Ppara | 1.0 ± 0.1 (6) | 1.1 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.1 ± 0.0 (3) | 0.9 ± 0.0 (3) | 1.2 ± 0.1 (3) | 1.4 ± 0.0 (3) | 1.3 ± 0.1 (3) | 1.3 ± 0.2 (3) |
| Ppard | 1.0 ± 0.1 (6) | 0.9 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.2 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.0 ± 0.2 (3) |
| Pparg | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Ppargc1a | 1.0 ± 0.0 (6) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.7 ± 0.0 (3) | 0.7 ± 0.1 (3) | 0.6 ± 0.0 (3) | 0.5 ± 0.0 (3) | 0.6 ± 0.0 (3) | 0.6 ± 0.0 (3) |
| Ppargc1b | 1.0 ± 0.1 (6) | 1.1 ± 0.2 (3) | 1.3 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.1 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) |
| Pprc1 | 1.0 ± 0.0 (6) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) | 0.9 ± 0.0 (3) | 1.2 ± 0.1 (3) |
| Pten | 1.0 ± 0.1 (6) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 0.8 ± 0.0 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) |
| Pyy | 1.0 ± 0.1 (6) | 1.1 ± 0.2 (3) | 1.0 ± 0.3 (3) | 0.8 ± 0.2 (3) | 0.9 ± 0.2 (3) | 0.8 ± 0.0 (3) | 1.0 ± 0.1 (3) | 3.2 ± 1.2 (3) | 2.9 ± 1.7 (3) |
| Rxra | 1.0 ± 0.0 (6) | 1.0 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.0 (3) | 1.1 ± 0.0 (3) | 1.0 ± 0.0 (3) |
| Rxrb | 1.0 ± 0.0 (6) | 1.0 ± 0.2 (3) | 1.2 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.1 (3) | 0.9 ± 0.0 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.0 (3) |
| Rxrg | 1.0 ± 0.0 (6) | 1.5 ± 0.3 (3) | 1.2 ± 0.0 (3) | 2.2 ± 0.5 (3) | 4.0 ± 0.3 (3) | 4.4 ± 0.8 (3) | 4.9 ± 0.2 (3) | 3.4 ± 0.1 (3) | 3.4 ± 0.3 (3) |
| Scd1 | 1.0 ± 0.0 (6) | 1.1 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.4 ± 0.2 (3) | 1.7 ± 0.2 (3) | 2.4 ± 0.2 (3) | 2.9 ± 0.1 (3) | 3.6 ± 0.4 (3) | 3.6 ± 0.3 (3) |
| Sirt1 | 1.0 ± 0.0 (6) | 0.9 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.9 ± 0.0 (3) |
| Slc22a5 | 1.0 ± 0.0 (6) | 1.0 ± 0.2 (3) | 1.6 ± 0.1 (3) | 1.7 ± 0.1 (3) | 2.6 ± 0.3 (3) | 2.4 ± 0.4 (3) | 3.4 ± 0.6 (3) | 3.2 ± 0.3 (3) | 2.9 ± 0.1 (3) |
| Slc27a1 | 1.0 ± 0.0 (6) | 1.0 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 0.9 ± 0.0 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) |
| Slc27a2 | 1.0 ± 0.0 (6) | 1.0 ± 0.0 (3) | 1.2 ± 0.0 (3) | 1.6 ± 0.1 (3) | 1.8 ± 0.1 (3) | 2.1 ± 0.1 (3) | 2.4 ± 0.1 (3) | 2.5 ± 0.0 (3) | 2.7 ± 0.1 (3) |
| Slc27a4 | 1.0 ± 0.0 (6) | 1.0 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.0 (3) |
| Slc27a5 | 1.0 ± 0.1 (6) | 1.2 ± 0.2 (3) | 1.1 ± 0.2 (3) | 1.2 ± 0.2 (3) | 1.1 ± 0.3 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.3 (3) |
| Slc27a6 | 1.0 ± 0.0 (6) | 1.4 ± 0.1 (3) | 1.1 ± 0.2 (3) | 1.1 ± 0.2 (3) | 1.4 ± 0.4 (3) | 1.0 ± 0.1 (3) | 1.3 ± 0.2 (3) | 1.7 ± 0.3 (3) | 1.5 ± 0.4 (3) |
| Smarcd3 | 1.0 ± 0.1 (6) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.2 ± 0.2 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.2 (3) |
| Sorbs1 | 1.0 ± 0.1 (6) | 1.2 ± 0.2 (3) | 1.5 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.2 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.3 ± 0.2 (3) |
| Src | 1.0 ± 0.0 (6) | 1.1 ± 0.3 (3) | 1.5 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.2 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) | 0.7 ± 0.1 (3) |
| Tgs1 | 1.0 ± 0.0 (6) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.8 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) |
| Txnip | 1.0 ± 0.0 (6) | 0.9 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.2 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.2 ± 0.2 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.2 (3) |
| Ucp1 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Actb | 1.0 ± 0.0 (6) | 1.1 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.0 (3) |
| B2m | 1.0 ± 0.0 (6) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.0 (3) |
| Hprt1 | 1.0 ± 0.0 (6) | 0.9 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.0 (3) |
| Ldha | 1.0 ± 0.0 (6) | 1.3 ± 0.0 (3) | 1.4 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.4 ± 0.0 (3) | 1.4 ± 0.1 (3) | 1.6 ± 0.1 (3) |
| Rplp1 | 1.0 ± 0.0 (6) | 1.1 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.2 ± 0.0 (3) | 1.2 ± 0.1 (3) | 0.9 ± 0.0 (3) | 0.9 ± 0.0 (3) | 0.9 ± 0.0 (3) | 1.1 ± 0.1 (3) |
| RGDC | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| RTC1 | 1.0 ± 0.0 (6) | 1.3 ± 0.2 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.6 ± 0.4 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.1 (3) | 1.2 ± 0.2 (3) |
| RTC2 | 1.0 ± 0.0 (6) | 1.3 ± 0.3 (3) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.6 ± 0.5 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.1 (3) | 1.1 ± 0.2 (3) |
| RTC3 | 1.0 ± 0.0 (6) | 1.4 ± 0.2 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.6 ± 0.5 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.1 (3) | 1.1 ± 0.1 (3) |
| PPC1 | 1.0 ± 0.0 (6) | 1.4 ± 0.2 (3) | 1.2 ± 0.0 (3) | 1.2 ± 0.1 (3) | 1.7 ± 0.6 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) | 0.8 ± 0.0 (3) | 1.2 ± 0.2 (3) |
| PPC2 | 1.0 ± 0.0 (6) | 1.5 ± 0.3 (3) | 1.2 ± 0.0 (3) | 1.2 ± 0.0 (3) | 1.8 ± 0.6 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.0 (3) | 1.1 ± 0.2 (3) |
| PPC3 | 1.0 ± 0.0 (6) | 1.5 ± 0.4 (3) | 1.2 ± 0.0 (3) | 1.2 ± 0.0 (3) | 1.7 ± 0.6 (3) | 0.8 ± 0.0 (3) | 0.9 ± 0.0 (3) | 0.8 ± 0.1 (3) | 1.2 ± 0.1 (3) |

Data represent fold induction versus control (mean ± standard error (n)).

Genes reported as “n/a” were not sufficiently expressed (CT ≥ 36) to analyze

GD=gestation day; PPAR=peroxisome proliferator activated receptor; HFPO-DA=hexafluoropropylene oxide-dimer acid

**Table S4. Fetal testis (collected GD18) gene expression of genes associated with phthalate-like male reproductive effects following GD14-18 maternal oral exposure to HFPO-DA.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Gene** | **HFPO-DA dose (mg/kg/d)** | | | | | |
|  | | **0** | **62.5** | **125** | **250** | **500** |
| Acox1 | | 1.0 ± 0.1 (2) | 1.3 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.2 ± 0.0 (2) |
| Actb | | 1.0 ± 0.0 (2) | 1.3 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (2) |
| Acvr2b | | 1.0 ± 0.2 (2) | 1.4 ± 0.1 (3) | 1.2 ± 0.2 (3) | 1.1 ± 0.1 (3) | 1.3 ± 0.3 (2) |
| Adh1 | | 1.0 ± 0.3 (2) | 1.3 ± 0.5 (3) | 1.7 ± 0.2 (3) | 1.2 ± 0.3 (3) | 1.7 ± 0.6 (2) |
| Aldh1a1 | | 1.0 ± 0.1 (2) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (2) |
| Amhr2 | | 1.0 ± 0.0 (2) | 1.0 ± 0.0 (3) | 0.9 ± 0.0 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.0 (2) |
| Apoa1 | | 1.0 ± 0.4 (2) | 0.6 ± 0.1 (3) | 1.7 ± 1.0 (3) | 0.7 ± 0.1 (3) | 1.8 ± 1.3 (2) |
| Ar | | 1.0 ± 0.0 (2) | 1.2 ± 0.0 (3) | 1.2 ± 0.2 (3) | 1.4 ± 0.2 (3) | 1.5 ± 0.2 (2) |
| Axin1 | | 1.0 ± 0.1 (2) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.0 (2) |
| Axin2 | | 1.0 ± 0.2 (2) | 1.3 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.2 ± 0.1 (2) |
| B2m | | 1.0 ± 0.1 (2) | 1.3 ± 0.0 (3) | 1.4 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.3 ± 0.2 (2) |
| Cbx2 | | 1.0 ± 0.1 (2) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.4 ± 0.2 (3) | 1.4 ± 0.1 (2) |
| Cyp11a1 | | 1.0 ± 0.0 (2) | 1.3 ± 0.0 (3) | 1.3 ± 0.2 (3) | 1.3 ± 0.1 (3) | 1.1 ± 0.1 (2) |
| Cyp11b1 | | 1.0 ± 0.2 (2) | 1.3 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.7 ± 0.3 (3) | 1.1 ± 0.1 (2) |
| Cyp11b2 | | 1.0 ± 0.2 (2) | 1.7 ± 0.2 (3) | 1.7 ± 0.2 (3) | 2.2 ± 0.3 (3) | 1.4 ± 0.1 (2) |
| Cyp17a1 | | 1.0 ± 0.0 (2) | 1.1 ± 0.1 (3) | 1.2 ± 0.2 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.0 (2) |
| Cyp4a1 | | n/a | n/a | n/a | n/a | n/a |
| Dhcr7 | | 1.0 ± 0.1 (2) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.3 ± 0.2 (3) | 1.4 ± 0.1 (2) |
| Dhh | | 1.0 ± 0.2 (2) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.7 ± 0.4 (3) | 1.5 ± 0.1 (2) |
| Dixdc1 | | 1.0 ± 0.2 (2) | 1.2 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (2) |
| Dkk1 | | 1.0 ± 0.2 (2) | 1.9 ± 1.0 (3) | 1.7 ± 0.2 (3) | 2.0 ± 0.5 (3) | 0.8 ± 0.1 (2) |
| Dkk3 | | 1.0 ± 0.1 (2) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.1 (2) |
| Dmrt1 | | 1.0 ± 0.2 (2) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.2 (3) | 1.0 ± 0.0 (2) |
| Dmrt2 | | 1.0 ± 0.5 (2) | 1.0 ± 0.3 (3) | 1.1 ± 0.3 (3) | 1.3 ± 0.5 (3) | 0.8 ± 0.1 (2) |
| Dvl1 | | 1.0 ± 0.0 (2) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.2 ± 0.2 (3) | 1.2 ± 0.1 (2) |
| Dvl2 | | 1.0 ± 0.0 (2) | 1.3 ± 0.1 (3) | 1.0 ± 0.2 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.4 (2) |
| Dvl3 | | 1.0 ± 0.0 (2) | 1.6 ± 0.0 (3) | 1.3 ± 0.2 (3) | 1.3 ± 0.1 (3) | 1.4 ± 0.1 (2) |
| Emx2 | | 1.0 ± 0.0 (2) | 1.2 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (2) |
| Esr1 | | 1.0 ± 0.2 (2) | 1.5 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.7 ± 0.1 (2) |
| Esr2 | | 1.0 ± 0.1 (2) | 0.8 ± 0.1 (3) | 0.7 ± 0.2 (3) | 0.9 ± 0.1 (3) | 1.1 ± 0.0 (2) |
| Fabp1 | | 1.0 ± 0.2 (2) | 0.9 ± 0.4 (3) | 14.8 ± 11.6 (3) | 4.2 ± 1.3 (3) | 12.8 ± 12.2 (2) |
| Fgf8 | | 1.0 ± 0.1 (2) | 1.3 ± 0.1 (3) | 1.1 ± 0.3 (3) | 1.3 ± 0.2 (3) | 1.6 ± 0.4 (2) |
| Fgf9 | | 1.0 ± 0.1 (2) | 1.2 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (2) |
| Gata4 | | 1.0 ± 0.0 (2) | 1.2 ± 0.0 (3) | 1.2 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.4 ± 0.0 (2) |
| Gusb | | 1.0 ± 0.0 (2) | 1.0 ± 0.0 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (2) |
| Hoxa2 | | 1.0 ± 0.3 (2) | 1.1 ± 0.3 (3) | 0.7 ± 0.1 (3) | 0.8 ± 0.1 (3) | 0.5 ± 0.3 (2) |
| Hsd17b3 | | 1.0 ± 0.1 (2) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.3 ± 0.1 (2) |
| Hsd3b | | 1.0 ± 0.1 (2) | 1.1 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.2 (2) |
| Inha | | 1.0 ± 0.1 (2) | 1.2 ± 0.1 (3) | 1.4 ± 0.2 (3) | 1.2 ± 0.2 (3) | 1.0 ± 0.0 (2) |
| Inhba | | 1.0 ± 0.2 (2) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.3 ± 0.1 (2) |
| Inhbb | | 1.0 ± 0.1 (2) | 1.1 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.1 ± 0.1 (2) |
| Insl3 | | 1.0 ± 0.0 (2) | 1.3 ± 0.1 (3) | 1.2 ± 0.2 (3) | 1.3 ± 0.1 (3) | 1.3 ± 0.0 (2) |
| Ldha | | 1.0 ± 0.0 (2) | 0.8 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.1 (2) |
| Lhcgr | | 1.0 ± 0.1 (2) | 1.5 ± 0.2 (3) | 1.3 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.2 ± 0.0 (2) |
| Lhx1 | | 1.0 ± 0.1 (2) | 1.4 ± 0.1 (3) | 1.5 ± 0.3 (3) | 1.6 ± 0.2 (3) | 1.2 ± 0.0 (2) |
| Lhx9 | | 1.0 ± 0.2 (2) | 1.4 ± 0.2 (3) | 1.1 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.2 ± 0.3 (2) |
| LOC691504 | | 1.0 ± 0.1 (2) | 1.4 ± 0.2 (3) | 1.5 ± 0.2 (3) | 1.7 ± 0.5 (3) | 1.1 ± 0.0 (2) |
| Mapk3 | | 1.0 ± 0.0 (2) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (2) |
| Nr0b1 | | 1.0 ± 0.2 (2) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.1 ± 0.2 (2) |
| Nr1d1 | | 1.0 ± 0.1 (2) | 1.2 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.2 ± 0.2 (3) | 1.3 ± 0.0 (2) |
| Nr3c1 | | 1.0 ± 0.0 (2) | 1.1 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.1 ± 0.2 (3) | 1.0 ± 0.0 (2) |
| Nr3c2 | | 1.0 ± 0.3 (2) | 1.1 ± 0.2 (3) | 0.7 ± 0.2 (3) | 0.9 ± 0.1 (3) | 1.1 ± 0.0 (2) |
| Nr4a2 | | 1.0 ± 0.2 (2) | 1.2 ± 0.1 (3) | 1.1 ± 0.2 (3) | 1.0 ± 0.0 (3) | 1.2 ± 0.2 (2) |
| Nr5a1 | | 1.0 ± 0.2 (2) | 1.1 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (2) |
| Ntf3 | | 1.0 ± 0.2 (2) | 1.2 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.0 (2) |
| Ntrk3 | | 1.0 ± 0.1 (2) | 1.6 ± 0.4 (3) | 1.3 ± 0.1 (3) | 1.3 ± 0.3 (3) | 1.2 ± 0.3 (2) |
| Pcaf | | 1.0 ± 0.1 (2) | 1.3 ± 0.1 (3) | 1.3 ± 0.2 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (2) |
| Pdgfa | | 1.0 ± 0.1 (2) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.3 ± 0.0 (2) |
| Pdgfra | | 1.0 ± 0.3 (2) | 1.0 ± 0.1 (3) | 0.8 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.0 (2) |
| Pou5f1 | | 1.0 ± 0.3 (2) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.2 (2) |
| Ppara | | 1.0 ± 0.2 (2) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.1 (3) | 1.1 ± 0.0 (2) |
| Ppard | | 1.0 ± 0.1 (2) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.2 ± 0.2 (3) | 1.2 ± 0.1 (2) |
| Pparg | | n/a | n/a | n/a | n/a | n/a |
| PPC | | 1.0 ± 0.1 (2) | 1.0 ± 0.2 (3) | 1.6 ± 0.4 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.0 (2) |
| Ptch1 | | 1.0 ± 0.1 (2) | 1.3 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.2 ± 0.2 (3) | 1.4 ± 0.0 (2) |
| Ptgds2 | | 1.0 ± 0.2 (2) | 1.2 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.2 (2) |
| Rara | | 1.0 ± 0.0 (2) | 1.3 ± 0.3 (3) | 1.1 ± 0.2 (3) | 1.1 ± 0.1 (3) | 1.4 ± 0.1 (2) |
| Rarb | | 1.0 ± 0.0 (2) | 1.3 ± 0.2 (3) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.2 ± 0.0 (2) |
| Rarg\_mapped | | 1.0 ± 0.0 (2) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.1 ± 0.1 (2) |
| RGD1563046 | | 1.0 ± 0.3 (2) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (3) | 0.9 ± 0.2 (3) | 1.1 ± 0.1 (2) |
| RGDC | | n/a | n/a | n/a | n/a | n/a |
| Rhox10 | | 1.0 ± 0.2 (2) | 0.9 ± 0.1 (3) | 0.9 ± 0.2 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (2) |
| Rhox5 | | 1.0 ± 0.1 (2) | 1.2 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.2 ± 0.2 (3) | 1.3 ± 0.2 (2) |
| RTC | | 1.0 ± 0.0 (2) | 0.8 ± 0.1 (3) | 1.3 ± 0.3 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (2) |
| Rxra | | 1.0 ± 0.0 (2) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.2 ± 0.2 (2) |
| Rxrb | | 1.0 ± 0.2 (2) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.2 ± 0.2 (2) |
| Rxrg | | 1.0 ± 0.1 (2) | 1.2 ± 0.4 (3) | 1.1 ± 0.3 (3) | 1.3 ± 0.3 (3) | 1.5 ± 0.2 (2) |
| Scarb1 | | 1.0 ± 0.1 (2) | 1.2 ± 0.1 (3) | 1.2 ± 0.2 (3) | 1.3 ± 0.2 (3) | 1.4 ± 0.2 (2) |
| Sfrp1 | | 1.0 ± 0.2 (2) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.2 (3) | 1.1 ± 0.2 (2) |
| Sfrp2 | | 1.0 ± 0.1 (2) | 1.0 ± 0.2 (3) | 0.7 ± 0.0 (3) | 1.1 ± 0.1 (3) | 0.9 ± 0.1 (2) |
| Sfrp4 | | 1.0 ± 0.4 (2) | 1.4 ± 0.3 (3) | 2.4 ± 0.7 (3) | 1.6 ± 0.5 (3) | 1.6 ± 0.4 (2) |
| Sfrp5 | | 1.0 ± 0.0 (2) | 3.3 ± 0.9 (3) | 1.7 ± 0.5 (3) | 1.5 ± 0.3 (3) | 2.2 ± 0.5 (2) |
| Smo | | 1.0 ± 0.2 (2) | 0.9 ± 0.0 (3) | 0.9 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.0 ± 0.0 (2) |
| Sox8 | | 1.0 ± 0.2 (2) | 1.5 ± 0.1 (3) | 1.4 ± 0.0 (3) | 1.6 ± 0.1 (3) | 1.6 ± 0.2 (2) |
| Sox9 | | 1.0 ± 0.2 (2) | 1.3 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.4 ± 0.3 (3) | 1.5 ± 0.1 (2) |
| Sra1 | | 1.0 ± 0.0 (2) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (2) |
| Sry | | 1.0 ± 0.3 (2) | 1.4 ± 0.3 (3) | 1.1 ± 0.2 (3) | 1.2 ± 0.1 (3) | 1.7 ± 0.1 (2) |
| Star | | 1.0 ± 0.2 (2) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (2) |
| Tgfb1 | | 1.0 ± 0.0 (2) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.1 ± 0.0 (2) |
| Tle1 | | 1.0 ± 0.1 (2) | 1.1 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.1 ± 0.1 (2) |
| Tle2 | | 1.0 ± 0.1 (2) | 1.0 ± 0.0 (3) | 1.1 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.1 (2) |
| Tspo | | 1.0 ± 0.1 (2) | 1.0 ± 0.0 (3) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.2 ± 0.0 (2) |
| Vdr | | 1.0 ± 0.3 (2) | 2.2 ± 0.0 (3) | 1.4 ± 0.1 (3) | 2.5 ± 0.3 (3) | 2.7 ± 0.3 (2) |
| Wnt7a | | 1.0 ± 0.3 (2) | 1.0 ± 0.1 (3) | 1.1 ± 0.3 (3) | 1.4 ± 0.3 (3) | 2.0 ± 1.0 (2) |
| Wt1 | | 1.0 ± 0.0 (2) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.2 (3) | 1.2 ± 0.0 (2) |
| Zfpm2 | | 1.0 ± 0.2 (2) | 1.3 ± 0.2 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.3 ± 0.2 (2) |

Data represent fold induction versus control testis expression (mean ± standard error (n)).

Genes labelled “n/a” were not sufficiently expressed (CT ≥ 36) to analyze.

GD=gestation day; HFPO-DA=hexafluoropropylene oxide-dimer acid

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **HFPO-DA dose (mg/kg/d)** | | | | | | | | |
|  | **0** | **1** | **3** | **10** | **30** | **62.5** | **125** | **250** | **500** |
| Dam BW GD14 (g) | 336.0 ± 11.4 (9) | 337.0 ± 12.9 (6) | 341.6 ± 14.1 (6) | 330.8 ± 13.4 (6) | 338.0 ± 11.5 (6) | 320.9 ± 8.7 (3) | 330.6 ± 8.8 (3) | 325.8 ± 3.7 (3) | 339.1 ± 10.5 (3) |
| Dam BW GD18 (g) | 369.6 ± 13.2 (9) | 369.8 ± 15.1 (6) | 378.6 ± 19.1 (6) | 364.1 ± 15.6 (6) | 371.5 ± 11.4 (6) | 354.3 ± 12.4 (3) | 366.2 ± 9.9 (3) | 346.7 ± 5.5 (3) | 350.2 ± 6.0 (3) |
| No. fetuses | 13.1 ± 0.5  (9) | 12.3 ± 1.0  (6) | 13.3 ± 0.6  (6) | 13.2 ± 0.5  (6) | 13.5 ± 0.4  (6) | 12.7 ± 0.9  (3) | 14.3 ± 0.3  (3) | 13.7 ± 1.3  (3) | 14.7 ± 0.3  (3) |
| No. resorptions | 0.1 ± 0.1  (9) | 0.0 ± 0.0  (6) | 0.0 ± 0.0  (6) | 0.0 ± 0.0  (6) | 0.2 ± 0.2  (6) | 0.0 ± 0.0  (3) | 0.0 ± 0.0  (3) | 0.0 ± 0.0  (3) | 0.0 ± 0.0  (3) |
| Dam liver wt  (g) | 16.7 ± 1.0  (9) | 15.8 ± 0.7  (6) | 16.7 ± 1.1  (6) | 16.5 ± 0.5  (6) | 17.2 ± 0.5  (6) | **17.8 ± 0.7**  **(3)** | **19.1 ± 0.6**  **(3)** | **19.6 ± 0.3**  **(3)** | **19.2 ± 0.6**  **(3)** |
| Fetal BW  (mg) | 875.4 ± 24.0 (6) | 908.7 ± 27.0 (3) | 816.7 ± 24.2 (3) | 841.0 ± 38.4 (3) | 842.2 ± 50.5 (3) | 863.7 ± 31.7 (3) | 841.8 ± 46.7 (3) | 889.1 ± 26.9 (3) | 808.2 ± 88.9 (3) |
| Dam BW gain  (g) | 33.7 ± 3.0  (9) | 32.8 ± 4.4  (6) | 37.0 ± 5.6  (6) | 33.3 ± 2.8  (6) | 33.6 ± 1.6  (6) | 33.4 ± 4.3  (3) | 35.5 ± 1.5  (3) | **20.9 ± 3.5**  **(3)** | **11.1 ± 4.4**  **(3)** |
| Dam serum T4  (ng/mL) | 22.8 ± 1.9  (6) | 27.9 ± 2.4  (3) | 23.0 ± 4.5  (3) | 17.5 ± 1.1  (3) | 28.4 ± 7.2  (3) | 20.3 ± 2.4  (3) | **11.6 ± 0.7**  **(3)** | **8.4 ± 1.8**  **(3)** | **5.5 ± 0.9**  **(3)** |
| Dam serum T3  (ng/mL) | 0.62 ± 0.04  (6) | 0.67 ± 0.07  (3) | 0.61 ± 0.03 (3) | 0.52 ± 0.07 (3) | **0.45 ± 0.06 (3)** | **0.38 ± 0.06 (3)** | **0.32 ± 0.03 (3)** | **<DL**  **(3)** | **<DL**  **(3)** |
| Dam serum Trig  (mg/dL) | 297.0 ± 40.9 (6) | 265.7 ± 118.6 (3) | 322.0 ± 17.9 (3) | 262.0 ± 41.5 (3) | 195.0 ± 15.3 (3) | 211.0 ± 20.8 (3) | 221.0 ± 48.2 (3) | 171.0 ± 4.6 (3) | **160.0 ± 59.4 (3)** |
| Dam serum HDL  (mg/dL) | 37.3 ± 1.7  (6) | 36.3 ± 3.7  (3) | 36.0 ± 2.5  (3) | 36.0 ± 2.5  (3) | 33.0 ± 3.6  (3) | 37.0 ± 1.2  (3) | 36.7 ± 4.7  (3) | **28.7 ± 3.2**  **(3)** | **19.3 ± 2.7**  **(3)** |
| Dam serum Chol  (mg/dL) | 79.3 ± 4.1  (6) | 86.3 ± 13.9  (3) | 74.3 ± 5.0  (3) | 69.7 ± 3.7  (3) | 68.0 ± 9.1  (3) | 72.0 ± 4.9  (3) | 69.3 ± 8.4  (3) | **54.3 ± 9.1**  **(3)** | **42.3 ± 8.8**  **(3)** |
| Dam serum LDL  (mg/dL) | 17.8 ± 0.9  (6) | 19.0 ± 3.2  (3) | 14.7 ± 0.3  (3) | 14.0 ± 0.6  (3) | 14.7 ± 0.9  (3) | 14.0 ± 1.2  (3) | **12.7 ± 0.9**  **(3)** | **12.3 ± 1.9**  **(3)** | **13.3 ± 1.9**  **(3)** |
| Fetal T prod (ng/mL) | 7.7 ± 0.8  (6) | 7.2 ± 0.5  (3) | 6.5 ± 0.6  (3) | 6.8 ± 0.7  (3) | 7.2 ± 0.7  (3) | 10.4 ± 1.3  (3) | 9.1 ± 1.0  (3) | 9.5 ± 0.3  (3) | 9.8 ± 0.4  (3) |
| Fetal T prod  (% Ctl) | 100.0 ± 7.8  (6) | 113.0 ± 7.5  (3) | 101.1 ± 9.1 (3) | 105.9 ± 10.2 (3) | 111.7 ± 10.6 (3) | 116.0 ± 14.2 (3) | 101.3 ± 11.7 (3) | 105.8 ± 3.3 (3) | 109.6 ± 4.7 (3) |

**Table S5. Maternal and fetal endpoints from GD14-18 oral maternal HFPO-DA exposure.**

Data represent mean ± standard error (n). Values significantly different (p<0.05) from control, based on AVOVA, are shaded with bold text.

BW: body weight; GD: gestation day; Trig: triglycerides; Chol: cholesterol; T prod: testosterone production; <DL: Below assay detection limit; T4: total thyroxine; T3: total triiodothyronine; HDL: high density lipoprotein; LDL: low density lipoprotein; HFPO-DA: hexafluoropropylene oxide-dimer acid

**Table S6. Maternal liver (collected GD18) PPAR gene expression following GD14-18 maternal oral exposure to HFPO-DA.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene** | **HFPO-DA dose (mg/kg/d)** | | | | | | | | |
|  | **0** | **1** | **3** | **10** | **30** | **62.5** | **125** | **250** | **500** |
| Acaa2 | 1.0 ± 0.1 (5) | 1.5 ± 0.4 (3) | 1.2 ± 0.1 (3) | 1.5 ± 0.3 (3) | 1.9 ± 0.5 (2) | 3.5 ± 0.2 (3) | 4.2 ± 0.6 (3) | 5.0 ± 0.3 (3) | 5.4 ± 0.7 (3) |
| Acadl | 1.0 ± 0.0 (5) | 0.9 ± 0.2 (3) | 1.2 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.5 ± 0.1 (2) | 2.3 ± 0.0 (3) | 2.3 ± 0.1 (3) | 2.7 ± 0.1 (3) | 2.7 ± 0.2 (3) |
| Acadm | 1.0 ± 0.1 (5) | 1.2 ± 0.2 (3) | 1.2 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.8 ± 0.1 (2) | 1.7 ± 0.2 (3) | 2.2 ± 0.1 (3) | 2.7 ± 0.2 (3) | 2.6 ± 0.2 (3) |
| Acox1 | 1.0 ± 0.0 (5) | 1.2 ± 0.2 (3) | 1.4 ± 0.1 (3) | 1.3 ± 0.2 (3) | 3.0 ± 0.1 (2) | 5.1 ± 0.5 (3) | 8.3 ± 0.6 (3) | 10.5 ± 0.8 (3) | 10.5 ± 1.2 (3) |
| Acox3 | 1.0 ± 0.0 (5) | 1.3 ± 0.1 (3) | 1.3 ± 0.0 (3) | 0.9 ± 0.2 (3) | 1.2 ± 0.1 (2) | 1.1 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.0 (3) |
| Acsl1 | 1.0 ± 0.1 (5) | 1.3 ± 0.1 (3) | 1.5 ± 0.0 (3) | 1.1 ± 0.3 (3) | 1.7 ± 0.1 (2) | 1.6 ± 0.1 (3) | 1.8 ± 0.1 (3) | 1.8 ± 0.0 (3) | 1.7 ± 0.1 (3) |
| Acsl3 | 1.0 ± 0.1 (5) | 0.9 ± 0.2 (3) | 1.1 ± 0.0 (3) | 0.9 ± 0.2 (3) | 1.0 ± 0.1 (2) | 1.7 ± 0.0 (3) | 2.0 ± 0.1 (3) | 2.4 ± 0.4 (3) | 2.7 ± 0.3 (3) |
| Acsl4 | 1.0 ± 0.0 (5) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.7 ± 0.1 (3) | 0.9 ± 0.1 (2) | 1.3 ± 0.0 (3) | 1.2 ± 0.0 (3) | 1.2 ± 0.1 (3) | 1.0 ± 0.0 (3) |
| Acsl5 | 1.0 ± 0.1 (5) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.7 ± 0.1 (3) | 0.9 ± 0.0 (2) | 1.1 ± 0.1 (3) | 1.0 ± 0.0 (3) | 0.8 ± 0.1 (3) | 0.5 ± 0.1 (3) |
| Adipoq | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Angptl4 | 1.0 ± 0.2 (5) | 2.3 ± 0.4 (3) | 3.4 ± 0.1 (3) | 2.1 ± 0.7 (3) | 3.6 ± 0.1 (2) | 3.0 ± 0.3 (3) | 3.0 ± 0.4 (3) | 2.9 ± 0.1 (3) | 2.5 ± 0.3 (3) |
| Apoa1 | 1.0 ± 0.0 (5) | 0.9 ± 0.2 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.2 (3) | 0.9 ± 0.1 (2) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.7 ± 0.0 (3) |
| Apoa5 | 1.0 ± 0.1 (5) | 1.1 ± 0.1 (3) | 1.2 ± 0.1 (3) | 0.5 ± 0.1 (3) | 0.8 ± 0.1 (2) | 0.7 ± 0.0 (3) | 0.6 ± 0.1 (3) | 0.5 ± 0.0 (3) | 0.3 ± 0.1 (3) |
| Apoc3 | 1.0 ± 0.1 (5) | 1.3 ± 0.1 (3) | 1.2 ± 0.1 (3) | 0.9 ± 0.0 (3) | 0.8 ± 0.0 (2) | 0.6 ± 0.0 (3) | 0.6 ± 0.1 (3) | 0.4 ± 0.0 (3) | 0.3 ± 0.0 (3) |
| Apoe | 1.0 ± 0.0 (5) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (3) | 0.8 ± 0.2 (3) | 0.9 ± 0.0 (2) | 0.9 ± 0.0 (3) | 0.9 ± 0.0 (3) | 0.8 ± 0.1 (3) | 0.7 ± 0.0 (3) |
| Aqp7 | 1.0 ± 0.1 (5) | 1.6 ± 0.2 (3) | 1.9 ± 0.2 (3) | 1.5 ± 0.4 (3) | 2.1 ± 0.5 (2) | 1.5 ± 0.1 (3) | 1.4 ± 0.2 (3) | 4.4 ± 0.3 (3) | 3.1 ± 1.0 (3) |
| Cd36 | 1.0 ± 0.1 (5) | 0.8 ± 0.2 (3) | 1.2 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.9 ± 0.1 (2) | 1.0 ± 0.0 (3) | 1.2 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.0 (3) |
| Clu | 1.0 ± 0.0 (5) | 1.1 ± 0.1 (3) | 1.4 ± 0.2 (3) | 0.8 ± 0.1 (3) | 1.3 ± 0.0 (2) | 1.2 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.5 ± 0.2 (3) | 1.6 ± 0.1 (3) |
| Cpt1a | 1.0 ± 0.1 (5) | 1.5 ± 0.6 (3) | 1.2 ± 0.2 (3) | 0.9 ± 0.2 (3) | 2.5 ± 0.2 (2) | 1.7 ± 0.2 (3) | 1.9 ± 0.0 (3) | 2.4 ± 0.2 (3) | 2.1 ± 0.3 (3) |
| Cpt1b | 1.0 ± 0.1 (5) | 2.1 ± 0.5 (3) | 2.0 ± 0.3 (3) | 1.4 ± 0.5 (3) | 1.5 ± 0.4 (2) | 2.6 ± 0.2 (3) | 3.8 ± 0.9 (3) | 19.0 ± 8.5 (3) | 23.7 ± 7.6 (3) |
| Cpt2 | 1.0 ± 0.0 (5) | 1.1 ± 0.2 (3) | 1.7 ± 0.2 (3) | 1.6 ± 0.1 (3) | 2.3 ± 0.1 (2) | 2.8 ± 0.2 (3) | 3.2 ± 0.1 (3) | 3.3 ± 0.0 (3) | 3.1 ± 0.2 (3) |
| Creb1 | 1.0 ± 0.0 (5) | 1.1 ± 0.2 (3) | 1.1 ± 0.0 (3) | 0.9 ± 0.2 (3) | 0.9 ± 0.0 (2) | 1.0 ± 0.0 (3) | 0.9 ± 0.1 (3) | 0.8 ± 0.0 (3) | 0.9 ± 0.0 (3) |
| Crebbp | 1.0 ± 0.0 (5) | 1.3 ± 0.2 (3) | 1.3 ± 0.1 (3) | 0.9 ± 0.2 (3) | 1.0 ± 0.0 (2) | 1.0 ± 0.0 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.0 ± 0.0 (3) |
| Cyp27a1 | 1.0 ± 0.1 (5) | 1.4 ± 0.1 (3) | 1.9 ± 0.1 (3) | 0.9 ± 0.2 (3) | 1.3 ± 0.0 (2) | 1.2 ± 0.0 (3) | 1.1 ± 0.2 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.1 (3) |
| Cyp7a1 | 1.0 ± 0.1 (5) | 0.9 ± 0.3 (3) | 2.0 ± 0.5 (3) | 1.0 ± 0.3 (3) | 1.1 ± 0.4 (2) | 0.4 ± 0.1 (3) | 0.3 ± 0.0 (3) | 0.2 ± 0.0 (3) | 0.3 ± 0.0 (3) |
| Dgat1 | 1.0 ± 0.0 (5) | 1.1 ± 0.1 (3) | 1.3 ± 0.0 (3) | 1.1 ± 0.3 (3) | 1.2 ± 0.0 (2) | 1.5 ± 0.0 (3) | 1.6 ± 0.1 (3) | 1.8 ± 0.1 (3) | 1.9 ± 0.1 (3) |
| Ech1 | 1.0 ± 0.0 (5) | 2.2 ± 0.6 (3) | 2.0 ± 0.3 (3) | 3.8 ± 0.1 (3) | 7.3 ± 0.5 (2) | 8.8 ± 1.1 (3) | 12.3 ± 0.4 (3) | 15.4 ± 1.3 (3) | 18.1 ± 1.5 (3) |
| Ehhadh | 1.0 ± 0.0 (5) | 1.5 ± 0.3 (3) | 2.9 ± 0.2 (3) | 3.0 ± 0.7 (3) | 7.9 ± 0.1 (2) | 18.0 ± 2.7 (3) | 37.0 ± 2.6 (3) | 53.5 ± 5.8 (3) | 55.0 ± 5.6 (3) |
| Eln | 1.0 ± 0.1 (5) | 2.5 ± 0.4 (3) | 1.4 ± 0.3 (3) | 1.0 ± 0.5 (3) | 2.1 ± 1.3 (2) | 0.9 ± 0.1 (3) | 1.6 ± 0.1 (3) | 1.3 ± 0.6 (3) | 0.9 ± 0.4 (3) |
| Ep300 | 1.0 ± 0.1 (5) | 1.3 ± 0.2 (3) | 1.4 ± 0.0 (3) | 0.8 ± 0.2 (3) | 1.1 ± 0.2 (2) | 1.0 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.1 (3) | 0.8 ± 0.1 (3) |
| Etfdh | 1.0 ± 0.0 (5) | 1.2 ± 0.2 (3) | 1.2 ± 0.0 (3) | 1.6 ± 0.4 (3) | 1.6 ± 0.1 (2) | 1.4 ± 0.0 (3) | 1.5 ± 0.0 (3) | 1.6 ± 0.1 (3) | 1.5 ± 0.1 (3) |
| Fabp1 | 1.0 ± 0.0 (5) | 1.1 ± 0.2 (3) | 1.0 ± 0.0 (3) | 1.5 ± 0.2 (3) | 1.4 ± 0.0 (2) | 2.2 ± 0.1 (3) | 2.5 ± 0.0 (3) | 2.7 ± 0.0 (3) | 2.3 ± 0.2 (3) |
| Fabp2 | 1.0 ± 0.1 (5) | 0.7 ± 0.2 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.3 (3) | 0.9 ± 0.1 (2) | 1.5 ± 0.1 (3) | 1.2 ± 0.2 (3) | 1.6 ± 0.1 (3) | 1.1 ± 0.1 (3) |
| Fabp3 | 1.0 ± 0.0 (5) | 1.0 ± 0.1 (3) | 1.2 ± 0.2 (3) | 1.1 ± 0.0 (3) | 0.8 ± 0.0 (2) | 1.3 ± 0.1 (3) | 1.1 ± 0.1 (3) | 3.8 ± 2.1 (3) | 5.6 ± 0.9 (3) |
| Fabp4 | 1.0 ± 0.2 (5) | 2.3 ± 0.8 (3) | 0.7 ± 0.2 (3) | 1.3 ± 0.5 (3) | 1.6 ± 0.1 (2) | 0.8 ± 0.1 (3) | 1.1 ± 0.2 (3) | 1.8 ± 0.8 (3) | 1.0 ± 0.1 (3) |
| Fabp5 | 1.0 ± 0.1 (5) | 1.0 ± 0.2 (3) | 1.0 ± 0.1 (3) | 1.3 ± 0.3 (3) | 1.3 ± 0.2 (2) | 1.2 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.3 ± 0.1 (3) | 0.8 ± 0.2 (3) |
| Fabp6 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Fabp7 | 1.0 ± 0.1 (5) | 2.0 ± 0.7 (3) | 1.1 ± 0.2 (3) | 1.9 ± 0.5 (3) | 1.8 ± 0.1 (2) | 1.3 ± 0.3 (3) | 1.7 ± 0.1 (3) | 2.0 ± 0.4 (3) | 1.7 ± 0.3 (3) |
| Fads2 | 1.0 ± 0.1 (5) | 1.0 ± 0.4 (3) | 1.4 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.8 ± 0.2 (2) | 2.7 ± 0.3 (3) | 3.0 ± 0.2 (3) | 2.6 ± 0.2 (3) | 1.8 ± 0.2 (3) |
| Fgr | 1.0 ± 0.2 (5) | 1.2 ± 0.2 (3) | 1.0 ± 0.0 (3) | 0.6 ± 0.1 (3) | 0.8 ± 0.0 (2) | 0.8 ± 0.1 (3) | 0.5 ± 0.1 (3) | 0.6 ± 0.0 (3) | 0.5 ± 0.0 (3) |
| Gk | 1.0 ± 0.1 (5) | 1.2 ± 0.2 (3) | 1.2 ± 0.0 (3) | 0.8 ± 0.2 (3) | 1.2 ± 0.1 (2) | 1.1 ± 0.2 (3) | 1.2 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.4 ± 0.1 (3) |
| Hif1a | 1.0 ± 0.0 (5) | 1.2 ± 0.0 (3) | 1.2 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (2) | 1.0 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.3 ± 0.1 (3) |
| Hmgcs2 | 1.0 ± 0.0 (5) | 1.3 ± 0.2 (3) | 1.5 ± 0.1 (3) | 1.1 ± 0.3 (3) | 2.0 ± 0.2 (2) | 2.3 ± 0.0 (3) | 2.7 ± 0.2 (3) | 3.0 ± 0.2 (3) | 3.1 ± 0.1 (3) |
| Hspd1 | 1.0 ± 0.0 (5) | 1.1 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.3 ± 0.1 (3) | 1.1 ± 0.0 (2) | 1.9 ± 0.1 (3) | 1.8 ± 0.1 (3) | 2.2 ± 0.1 (3) | 2.1 ± 0.1 (3) |
| Ilk | 1.0 ± 0.0 (5) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.1 ± 0.2 (2) | 0.9 ± 0.0 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) |
| Klf10 | 1.0 ± 0.1 (5) | 1.8 ± 0.5 (3) | 2.0 ± 0.6 (3) | 1.5 ± 0.5 (3) | 2.5 ± 0.1 (2) | 2.3 ± 0.1 (3) | 2.5 ± 0.3 (3) | 2.4 ± 0.5 (3) | 2.5 ± 0.1 (3) |
| Lpin1 | 1.0 ± 0.1 (5) | 1.2 ± 0.1 (3) | 1.4 ± 0.3 (3) | 0.8 ± 0.2 (3) | 1.1 ± 0.1 (2) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 1.0 ± 0.0 (3) | 0.9 ± 0.1 (3) |
| Lpl | 1.0 ± 0.1 (5) | 2.0 ± 0.7 (3) | 0.7 ± 0.0 (3) | 0.9 ± 0.4 (3) | 1.1 ± 0.1 (2) | 0.8 ± 0.1 (3) | 0.7 ± 0.1 (3) | 5.1 ± 2.9 (3) | 6.7 ± 2.9 (3) |
| Med1 | 1.0 ± 0.0 (5) | 1.2 ± 0.2 (3) | 1.3 ± 0.0 (3) | 0.7 ± 0.0 (3) | 1.0 ± 0.1 (2) | 0.8 ± 0.0 (3) | 0.9 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) |
| Mlycd | 1.0 ± 0.1 (5) | 1.1 ± 0.2 (3) | 1.4 ± 0.2 (3) | 1.0 ± 0.4 (3) | 1.5 ± 0.0 (2) | 2.1 ± 0.1 (3) | 2.5 ± 0.1 (3) | 2.9 ± 0.4 (3) | 2.5 ± 0.4 (3) |
| Mmp9 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Ncoa3 | 1.0 ± 0.1 (5) | 1.4 ± 0.2 (3) | 1.4 ± 0.0 (3) | 0.8 ± 0.2 (3) | 1.0 ± 0.0 (2) | 0.9 ± 0.1 (3) | 0.9 ± 0.2 (3) | 0.8 ± 0.1 (3) | 0.8 ± 0.1 (3) |
| Ncoa6 | 1.0 ± 0.0 (5) | 1.4 ± 0.1 (3) | 1.2 ± 0.0 (3) | 1.1 ± 0.4 (3) | 1.2 ± 0.0 (2) | 0.7 ± 0.1 (3) | 0.8 ± 0.0 (3) | 0.7 ± 0.1 (3) | 0.9 ± 0.1 (3) |
| Nr1h3 | 1.0 ± 0.0 (5) | 1.1 ± 0.2 (3) | 1.5 ± 0.1 (3) | 0.8 ± 0.2 (3) | 1.1 ± 0.0 (2) | 1.6 ± 0.1 (3) | 1.6 ± 0.1 (3) | 1.5 ± 0.1 (3) | 1.3 ± 0.1 (3) |
| Olr1 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Pck1 | 1.0 ± 0.2 (5) | 1.2 ± 0.4 (3) | 1.3 ± 0.1 (3) | 0.5 ± 0.1 (3) | 1.0 ± 0.4 (2) | 1.0 ± 0.2 (3) | 1.3 ± 0.5 (3) | 1.1 ± 0.6 (3) | 1.8 ± 0.9 (3) |
| Pck2 | 1.0 ± 0.1 (5) | 1.1 ± 0.2 (3) | 1.6 ± 0.3 (3) | 1.1 ± 0.2 (3) | 1.0 ± 0.1 (2) | 1.9 ± 0.4 (3) | 1.5 ± 0.2 (3) | 2.2 ± 0.3 (3) | 2.8 ± 0.3 (3) |
| Pdpk1 | 1.0 ± 0.1 (5) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.8 ± 0.1 (3) | 0.9 ± 0.0 (2) | 1.0 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.0 (3) |
| Pltp | 1.0 ± 0.1 (5) | 1.2 ± 0.2 (3) | 1.2 ± 0.2 (3) | 0.7 ± 0.1 (3) | 0.9 ± 0.1 (2) | 1.4 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.0 (3) |
| Ppara | 1.0 ± 0.1 (5) | 1.1 ± 0.1 (3) | 0.8 ± 0.0 (3) | 0.7 ± 0.2 (3) | 0.6 ± 0.0 (2) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.8 ± 0.1 (3) | 0.9 ± 0.1 (3) |
| Ppard | 1.0 ± 0.1 (5) | 1.0 ± 0.2 (3) | 1.5 ± 0.1 (3) | 0.6 ± 0.2 (3) | 0.9 ± 0.1 (2) | 1.0 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.1 ± 0.2 (3) | 0.7 ± 0.1 (3) |
| Pparg | 1.0 ± 0.1 (5) | 1.6 ± 0.4 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.2 (3) | 0.9 ± 0.0 (2) | 0.8 ± 0.1 (3) | 1.2 ± 0.2 (3) | 1.7 ± 0.9 (3) | 0.5 ± 0.1 (3) |
| Ppargc1a | 1.0 ± 0.1 (5) | 1.1 ± 0.2 (3) | 0.7 ± 0.3 (3) | 0.5 ± 0.1 (3) | 0.6 ± 0.1 (2) | 0.6 ± 0.0 (3) | 0.7 ± 0.1 (3) | 0.8 ± 0.5 (3) | 0.4 ± 0.0 (3) |
| Ppargc1b | 1.0 ± 0.1 (5) | 1.1 ± 0.1 (3) | 1.3 ± 0.1 (3) | 0.9 ± 0.3 (3) | 0.8 ± 0.2 (2) | 0.7 ± 0.0 (3) | 0.7 ± 0.2 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.3 (3) |
| Pprc1 | 1.0 ± 0.1 (5) | 1.2 ± 0.4 (3) | 1.2 ± 0.3 (3) | 1.2 ± 0.2 (3) | 1.0 ± 0.2 (2) | 1.2 ± 0.2 (3) | 1.2 ± 0.3 (3) | 1.4 ± 0.2 (3) | 1.5 ± 0.3 (3) |
| Pten | 1.0 ± 0.0 (5) | 0.8 ± 0.1 (3) | 1.1 ± 0.1 (3) | 0.8 ± 0.0 (3) | 0.9 ± 0.1 (2) | 1.0 ± 0.1 (3) | 0.9 ± 0.0 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.1 (3) |
| Pyy | 1.0 ± 0.1 (5) | 1.6 ± 0.4 (3) | 1.3 ± 0.0 (3) | 1.1 ± 0.4 (3) | 1.2 ± 0.0 (2) | 1.6 ± 0.0 (3) | 2.0 ± 0.3 (3) | 2.1 ± 1.0 (3) | 1.8 ± 0.4 (3) |
| Rxra | 1.0 ± 0.0 (5) | 1.2 ± 0.0 (3) | 1.4 ± 0.0 (3) | 0.7 ± 0.2 (3) | 1.0 ± 0.1 (2) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.0 ± 0.1 (3) |
| Rxrb | 1.0 ± 0.1 (5) | 1.5 ± 0.4 (3) | 1.4 ± 0.1 (3) | 0.9 ± 0.3 (3) | 1.1 ± 0.0 (2) | 0.8 ± 0.0 (3) | 0.9 ± 0.1 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) |
| Rxrg | 1.0 ± 0.0 (5) | 1.5 ± 0.1 (3) | 1.6 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.7 ± 0.0 (2) | 1.5 ± 0.1 (3) | 1.6 ± 0.1 (3) | 1.6 ± 0.1 (3) | 1.3 ± 0.1 (3) |
| Scd1 | 1.0 ± 0.1 (5) | 0.8 ± 0.1 (3) | 2.0 ± 0.4 (3) | 1.5 ± 0.2 (3) | 2.7 ± 0.2 (2) | 4.1 ± 0.3 (3) | 4.7 ± 0.1 (3) | 5.6 ± 0.4 (3) | 3.7 ± 0.4 (3) |
| Sirt1 | 1.0 ± 0.1 (5) | 1.0 ± 0.1 (3) | 1.1 ± 0.0 (3) | 0.8 ± 0.1 (3) | 1.0 ± 0.2 (2) | 0.9 ± 0.1 (3) | 0.9 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.1 ± 0.0 (3) |
| Slc22a5 | 1.0 ± 0.1 (5) | 1.5 ± 0.2 (3) | 2.0 ± 0.3 (3) | 1.4 ± 0.2 (3) | 3.1 ± 0.2 (2) | 2.6 ± 0.5 (3) | 3.0 ± 0.1 (3) | 3.8 ± 0.5 (3) | 4.0 ± 0.4 (3) |
| Slc27a1 | 1.0 ± 0.1 (5) | 1.5 ± 0.1 (3) | 1.6 ± 0.0 (3) | 0.9 ± 0.3 (3) | 1.4 ± 0.0 (2) | 1.1 ± 0.1 (3) | 1.0 ± 0.1 (3) | 1.3 ± 0.2 (3) | 1.3 ± 0.2 (3) |
| Slc27a2 | 1.0 ± 0.1 (5) | 1.3 ± 0.2 (3) | 1.3 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.8 ± 0.1 (2) | 2.1 ± 0.2 (3) | 2.2 ± 0.1 (3) | 2.3 ± 0.1 (3) | 2.3 ± 0.2 (3) |
| Slc27a4 | 1.0 ± 0.1 (5) | 1.3 ± 0.1 (3) | 1.5 ± 0.1 (3) | 0.8 ± 0.2 (3) | 1.0 ± 0.1 (2) | 1.5 ± 0.1 (3) | 1.0 ± 0.0 (3) | 1.1 ± 0.2 (3) | 0.9 ± 0.0 (3) |
| Slc27a5 | 1.0 ± 0.1 (5) | 1.7 ± 0.4 (3) | 1.2 ± 0.0 (3) | 1.2 ± 0.2 (3) | 1.1 ± 0.0 (2) | 0.9 ± 0.0 (3) | 1.0 ± 0.3 (3) | 0.7 ± 0.0 (3) | 0.7 ± 0.1 (3) |
| Slc27a6 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Smarcd3 | 1.0 ± 0.1 (5) | 1.2 ± 0.1 (3) | 1.4 ± 0.1 (3) | 0.8 ± 0.2 (3) | 0.8 ± 0.1 (2) | 1.0 ± 0.1 (3) | 1.1 ± 0.2 (3) | 1.2 ± 0.5 (3) | 0.6 ± 0.1 (3) |
| Sorbs1 | 1.0 ± 0.1 (5) | 2.0 ± 0.3 (3) | 1.9 ± 0.8 (3) | 1.0 ± 0.5 (3) | 1.3 ± 0.3 (2) | 1.7 ± 0.1 (3) | 1.8 ± 0.4 (3) | 3.5 ± 0.8 (3) | 2.7 ± 0.6 (3) |
| Src | 1.0 ± 0.1 (5) | 1.5 ± 0.1 (3) | 1.0 ± 0.0 (3) | 0.6 ± 0.1 (3) | 0.9 ± 0.2 (2) | 1.1 ± 0.0 (3) | 1.6 ± 0.3 (3) | 1.5 ± 0.5 (3) | 1.0 ± 0.2 (3) |
| Tgs1 | 1.0 ± 0.0 (5) | 0.8 ± 0.3 (3) | 0.9 ± 0.0 (3) | 0.7 ± 0.2 (3) | 0.9 ± 0.1 (2) | 0.8 ± 0.1 (3) | 1.1 ± 0.2 (3) | 1.1 ± 0.1 (3) | 0.9 ± 0.1 (3) |
| Txnip | 1.0 ± 0.1 (5) | 1.2 ± 0.1 (3) | 1.3 ± 0.3 (3) | 1.6 ± 0.6 (3) | 3.7 ± 0.0 (2) | 3.8 ± 0.6 (3) | 4.5 ± 0.5 (3) | 3.9 ± 0.9 (3) | 2.7 ± 0.2 (3) |
| Ucp1 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Actb | 1.0 ± 0.0 (5) | 1.0 ± 0.2 (3) | 1.1 ± 0.0 (3) | 0.8 ± 0.2 (3) | 0.9 ± 0.1 (2) | 0.9 ± 0.0 (3) | 0.9 ± 0.0 (3) | 0.8 ± 0.0 (3) | 0.8 ± 0.0 (3) |
| B2m | 1.0 ± 0.0 (5) | 1.3 ± 0.1 (3) | 1.3 ± 0.1 (3) | 0.9 ± 0.0 (3) | 1.2 ± 0.1 (2) | 0.8 ± 0.1 (3) | 0.8 ± 0.0 (3) | 0.7 ± 0.0 (3) | 0.7 ± 0.1 (3) |
| Hprt1 | 1.0 ± 0.0 (5) | 0.9 ± 0.0 (3) | 0.8 ± 0.0 (3) | 1.1 ± 0.2 (3) | 1.0 ± 0.0 (2) | 1.1 ± 0.0 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) | 1.1 ± 0.1 (3) |
| Ldha | 1.0 ± 0.0 (5) | 0.9 ± 0.2 (3) | 1.0 ± 0.1 (3) | 0.9 ± 0.1 (3) | 1.4 ± 0.0 (2) | 2.2 ± 0.0 (3) | 2.3 ± 0.1 (3) | 2.2 ± 0.2 (3) | 1.8 ± 0.1 (3) |
| Rplp1 | 1.0 ± 0.0 (5) | 1.2 ± 0.2 (3) | 1.1 ± 0.0 (3) | 1.2 ± 0.1 (3) | 1.2 ± 0.1 (2) | 1.1 ± 0.0 (3) | 1.0 ± 0.1 (3) | 1.2 ± 0.1 (3) | 1.1 ± 0.1 (3) |
| RGDC | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| RTC1 | 1.0 ± 0.1 (5) | 1.6 ± 0.3 (3) | 1.3 ± 0.1 (3) | 0.8 ± 0.4 (3) | 1.2 ± 0.0 (2) | 0.9 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.7 ± 1.1 (3) | 0.6 ± 0.0 (3) |
| RTC2 | 1.0 ± 0.1 (5) | 1.6 ± 0.3 (3) | 1.3 ± 0.1 (3) | 1.1 ± 0.4 (3) | 1.2 ± 0.0 (2) | 1.0 ± 0.1 (3) | 1.4 ± 0.2 (3) | 1.7 ± 1.1 (3) | 0.6 ± 0.0 (3) |
| RTC3 | 1.0 ± 0.1 (5) | 1.5 ± 0.3 (3) | 1.3 ± 0.1 (3) | 1.1 ± 0.4 (3) | 1.2 ± 0.0 (2) | 0.9 ± 0.1 (3) | 1.4 ± 0.2 (3) | 1.6 ± 1.0 (3) | 0.5 ± 0.0 (3) |
| PPC1 | 1.0 ± 0.1 (5) | 1.5 ± 0.3 (3) | 1.3 ± 0.1 (3) | 1.0 ± 0.4 (3) | 1.2 ± 0.0 (2) | 0.9 ± 0.1 (3) | 1.3 ± 0.1 (3) | 1.7 ± 1.1 (3) | 0.5 ± 0.0 (3) |
| PPC2 | 1.0 ± 0.1 (5) | 1.5 ± 0.3 (3) | 1.3 ± 0.1 (3) | 1.1 ± 0.4 (3) | 1.2 ± 0.0 (2) | 0.9 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.7 ± 1.1 (3) | 0.5 ± 0.0 (3) |
| PPC3 | 1.0 ± 0.1 (5) | 1.5 ± 0.3 (3) | 1.3 ± 0.1 (3) | 1.0 ± 0.3 (3) | 1.1 ± 0.0 (2) | 1.0 ± 0.1 (3) | 1.4 ± 0.1 (3) | 1.7 ± 1.1 (3) | 0.5 ± 0.0 (3) |

Data represent fold induction versus control (mean ± standard error (n)).

Genes labelled “n/a” were not sufficiently expressed (CT  ≥ 36) to analyze.

GD=gestation day; PPAR=peroxisome proliferator activated receptor; HFPO-DA=hexafluoropropylene oxide-dimer acid

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Litter means** | |  | **Individual means** | |
|  | **0 mg/kg/d** | **125 mg/kg/d** |  | **0 mg/kg/d** | **125 mg/kg/d** |
| Dam BW GD14 (g) | 333.1 ± 6.2 (2) | 325.5 ± 5.2 (3) |  | - | - |
| Dam BW GD18 (g) | 366.0 ± 5.5 (2) | 354.9 ± 9.0 (3) |  | - | - |
| Dam BW gain (g) | 32.9 ± 0.7 (2) | 29.4 ± 6.0 (3) |  | - | - |
| No. implants | 13.0 ± 2.0 (2) | 13.0 ± 1.0 (3) |  | - | - |
| No. pups on PND2 | 12.5 ± 1.5 (2) | 12.7 ± 0.7 (3) |  | - | - |
| Post-implantation loss (%) on PND2 | 3.4 ± 3.4 (2) | 2.2 ± 2.2 (3) |  | - | - |
| Female pup BW on PND2 (g) | 7.9 ± 1.0 (2) | 7.5 ± 0.1 (3) |  | 8.2 ± 0.3 (11) | **7.5 ± 0.1 (19)** |
| Female AGD on PND2 (mm) | 1.7 ± 0.1 (2) | 1.5 ± 0.1 (3) |  | 1.7 ± 0.1 (11) | 1.5 ± 0.0 (19) |
| Male pup BW on PND2 (g) | 8.1 ± 1.2 (2) | 7.8 ± 0.1 (3) |  | 7.6 ± 0.3 (14) | 7.8 ± 0.1 (19) |
| Male AGD on PND2 (mm) | 3.7 ± 0.2 (2) | 3.7 ± 0.1 (3) |  | 3.6 ± 0.1 (14) | 3.7 ± 0.1 (19) |
| Female pup BW on PND13 (g) | 28.1 ± 2.3 (2) | 28.7 ± 0.1 (3) |  | 28.7 ± 0.8 (11) | 28.7 ± 0.3 (19) |
| Female NR on PND13 (#) | 12.0 ± 0.0 (2) | 12.0 ± 0.0 (3) |  | 12.0 ± 0.0 (11) | 12.0 ± 0.0 (19) |
| Male pup BW on PND13 (g) | 28.5 ± 2.8 (2) | 29.5 ± 0.5 (3) |  | 27.3 ± 0.8 (14) | 29.3 ± 0.3 (19) |
| Male NR on PND2 (#) | 0.0 ± 0.0 (2) | 0.1 ± 0.1 (3) |  | 0.0 ± 0.0 (14) | 0.1 ± 0.1 (19) |
| Female BW on PND27 (g) | 82.4 ± 9.1 (2) | 78.2 ± 3.5 (3) |  | 84.9 ± 3.0 (11) | **79.1 ± 1.4 (19)** |
| Male BW on PND27 (g) | 84.5 ± 9.3 (2) | 83.3 ± 4.7 (3) |  | 80.5 ± 2.5 (14) | 81.1 ± 1.6 (19) |
| Female BW at VO (g) | 131.3 ± 3.7 (2) | 124.3 ± 4.2 (3) |  | 132.3 ± 3.6 (11) | **123.4 ± 2.3 (19)** |
| Male BW at PPS (g) | 215.5 ± 6.5 (2) | 214.6 ± 8.0 (3) |  | 212.8 ± 2.8 (14) | 211.4 ± 3.7 (19) |

**Table S7. Maternal, perinatal, and pubertal endpoints from pilot postnatal study (GD14-18 oral maternal HFPO-DA dosing).**

Data represent mean ± standard error (n). Values significantly different (p<0.05) from control, based on ANOVA, identified in bold text and shaded cells.

BW: body weight; GD: gestation day; PND: postnatal day; AGD: ano-genital distance; NR: nipple retention; VO: vaginal opening; PPS: preputial separation; HFPO-DA: hexafluoropropylene oxide-dimer acid

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Litter means** | |  | **Individual means** | |
|  | **0 mg/kg/d** | **125 mg/kg/d** |  | **0 mg/kg/d** | **125 mg/kg/d** |
| Body weight (g) | 686.6 ± 39.1 (2) | 682.6 ± 13.4 (3) |  | 703.3 ± 17.9 (14) | 676.5 ± 10.6 (19) |
| Glans penis (mg) | 139.8 ± 1.1 (2) | 135.0 ± 1.5 (3) |  | 139.4 ± 2.6 (13) | 134.5 ± 3.0 (19) |
| Ventral prostate (mg) | 725.5 ± 31.7 (2) | 678.7 ± 30.1 (3) |  | 711.9 ± 41.4 (14) | 682.1 ± 32.7 (19) |
| Paired seminal vesicles (g) | 1.8 ± 0.0 (2) | 1.8 ± 0.1 (3) |  | 1.8 ± 0.1 (14) | 1.8 ± 0.1 (19) |
| Paired testes (g) | 4.1 ± 0.1 (2) | 3.8 ± 0.1 (3) |  | 4.2 ± 0.1 (14) | **3.8 ± 0.1 (19)** |
| Paired epididymides (mg) | 1417.8 ± 8.8 (2) | 1323.7 ± 24.3 (3) |  | 1421.6 ± 15.6 (14) | **1331.2 ± 21.2 (19)** |
| Right testis (g) | 2.1 ± 0.1 (2) | 1.9 ± 0.0 (3) |  | 2.1 ± 0.0 (14) | **1.9 ± 0.0 (19)** |
| Right cauda (mg) | 327.8 ± 7.7 (2) | 309.0 ± 6.0 (3) |  | 324.5 ± 4.5 (14) | 310.5 ± 6.2 (19) |
| Right corpus/caput (mg) | 387.7 ± 14.3 (2) | 350.5 ± 5.9 (3) |  | 393.8 ± 5.5 (14) | **352.6 ± 7.1 (19)** |
| Right epididymis (mg) | 715.5 ± 6.6 (2) | **659.5 ± 11.8 (3)** |  | 718.3 ± 7.1 (14) | **663.1 ± 11.2 (19)** |
| Left testis (g) | 2.1 ± 0.0 (2) | 1.9 ± 0.0 (3) |  | 2.1 ± 0.0 (14) | **1.9 ± 0.0 (19)** |
| Left epididymis (mg) | 702.4 ± 2.2 (2) | 664.2 ± 12.5 (3) |  | 703.3 ± 10.0 (14) | **668.1 ± 10.4 (19)** |
| LABC (g) | 1.5 ± 0.0 (2) | 1.5 ± 0.1 (3) |  | 1.5 ± 0.0 (14) | 1.6 ± 0.0 (19) |
| Paired Cowper’s glands (mg) | 153.7 ± 4.6 (2) | 165.6 ± 9.7 (3) |  | 151.8 ± 5.9 (14) | 163.4 ± 5.2 (19) |
| Visceral adipose tissue (g) | 26.2 ± 3.0 (2) | 26.8 ± 2.4 (3) |  | 27.5 ± 1.6 (14) | 25.8 ± 1.5 (19) |
| Epididymal adipose tissue (g) | 9.1 ± 1.3 (2) | 8.2 ± 1.0 (3) |  | 9.6 ± 0.7 (14) | **7.8 ± 0.5 (19)** |
| Paired kidneys (g) | 3.6 ± 0.1 (2) | 3.4 ± 0.0 (3) |  | 3.6 ± 0.1 (14) | 3.4 ± 0.1 (18) |
| Liver (g) | 20.9 ± 1.3 (2) | 20.2 ± 0.4 (3) |  | 21.4 ± 0.7 (14) | 20.1 ± 0.4 (19) |
| Corpus/caput sperm (106) | 75.8 ± 0.6 (2) | 72.0 ± 2.8 (3) |  | 75.9 ± 2.0 (10) | 72.6 ± 2.3 (15) |
| Cauda sperm (106) | 168.9 ± 6.9 (2) | 160.0 ± 3.4 (3) |  | 167.5 ± 5.6 (10) | 159.7 ± 4.7 (15) |
| Total epididymal sperm (106) | 195.8 ± 5.1 (2) | 185.6 ± 2.0 (3) |  | 194.8 ± 5.3 (10) | 185.8 ± 4.7 (15) |

**Table S8. Adult male necropsy endpoints from pilot postnatal study (GD14-18 oral maternal HFPO-DA dosing).**

Data represent mean ± standard error (n). Values significantly different (p<0.05) from control, based on ANOVA, identified in bold text and shaded cells.

GD: gestation day; LABC: levator ani-bulbocavernosus; HFPO-DA: hexafluoropropylene oxide-dimer acid

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Litter means** | |  | **Individual means** | |
|  | **0 mg/kg/d** | **125 mg/kg/d** |  | **0 mg/kg/d** | **125 mg/kg/d** |
| Body weight (g) | 378.1 ± 16.9 (2) | 374.0 ± 25.0 (3) |  | 373.5 ± 8.3 (11) | 370.3 ± 12.3 (19) |
| AGD (mm) | 18.9 ± 0.6 (2) | 16.8 ± 0.5 (3) |  | 19.1 ± 0.4 (11) | **16.7 ± 0.7 (19)** |
| Uterus (mg) | 630.7 ± 52.5 (2) | 635.4 ± 74.3 (3) |  | 645.0 ± 55.8 (11) | 635.6 ± 48.9 (19) |
| Paired ovaries (mg) | 135.5 ± 3.4 (2) | 122.5 ± 8.6 (3) |  | 134.6 ± 4.6 (11) | 123.2 ± 3.6 (19) |
| Liver (g) | 12.7 ± 0.7 (2) | 11.4 ± 0.5 (3) |  | 12.5 ± 0.4 (11) | **11.3 ± 0.3 (19)** |
| Paired kidneys (g) | 2.2 ± 0.1 (2) | 2.1 ± 0.1 (3) |  | 2.3 ± 0.1 (11) | 2.1 ± 0.1 (19) |
| Visceral adipose tissue (g) | 23.9 ± 3.2 (2) | 25.1 ± 4.6 (3) |  | 23.0 ± 1.7 (11) | 25.2 ± 2.4 (19) |

**Table S9. Adult female necropsy endpoints from pilot postnatal study (GD14-18 oral maternal HFPO-DA dosing).**

Data represent mean ± standard error (n). Values significantly different (p<0.05) from control, based on ANOVA, identified in bold text and shaded cells.

GD: gestation day; AGD: ano-genital distance; HFPO-DA: hexafluoropropylene oxide-dimer acid

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **HFPO-DA dose (mg/kg/d)** | | | | | | | | |
|  | **0** | **1** | **3** | **10** | **30** | **62.5** | **125** | **250** | **500** |
| Pregnant dam serum  (µg/mL) | 0.027 ± 0.008 (9) | 0.68 ± 0.08 (6) | 1.2 ± 0.3  (6) | 4.6 ± 1.1  (6) | 13.9 ± 3.1  (6) | 30.7 ± 2.9 (3) | 46.0 ± 10.3  (3) | 81.8 ± 21.6  (3) | 100.7 ± 26.4 (3) |
| Fetal plasma  (µg/mL) | 0.018 ± 0.010 (3) | 0.13 ± 0.06 (3) | 0.49 ± 0.04 (3) | 1.9 ± 0.2  (3) | 3.5 ± 0.4  (3) | n/a | n/a | n/a | n/a |

**Table S10. Maternal serum and fetal/neonatal plasma HFPO-DA concentrations.**

Data represent mean ± standard error (n)

n/a indicates no sample collected at that dose

HFPO-DA=hexafluoropropylene oxide-dimer acid