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Zhou et al., Supplemental Table S2. Primers and conditions used in real-time RT-PCR.

Gene	5′-primer	3′-primer
Pah	5′- agcctgaggaatgacattgg -3′	5′- tcggctccatagctgagaat -3′
Ces3	5′- gatggtgcctcagaagagga -3′	5′- ctttgtccttcagcctctgg -3′
Timp1	5′- tgcaactcggacctggttat -3′	5′- acagcgtcgaatcctttgag -3′
Star	5′- cacagtcatcacccatgagc -3′	5′- agctctgatgacaccgcttt -3′
Gsta2	5′- ggagagagccctgattgaca -3′	5′- cagaaggctggcatcaaact -3′
Ctgf	5′- aagacacatttggccctgac -3′	5′- cttgacaggcttggcaattt -3′
Espn	5′- acctacgtacggtgcaaacc -3′	5′- gggtgaagacatgcctgagt -3′
Ace	5′- catgtcagcctctgccatta -3′	5′- agttgacgcgactggactct -3′
Kitlg	5′- ggcctacaatggacagcaat -3′	5′- tcaactgcccttgtaagacttg -3′
Tf	5′- gtcactgccattcgaaatca -3′	5′- ccacactggcctgctatgta -3′
Igfbp3	5′- tcccaaactgtgacaagaagg -3′	5′- agctgctgatcacgttgttg -3′
Shbg	5′- gacggaccctgagacacatt -3′	5′- cccaggttcgaaactcaaag -3′
Pltp	5′- tgattaactccccgctgaag -3′	5′- ccttgcccttgagtgtcaac -3′
Cd36	5′- ttgggaaagttattgcgaca -3′	5′- cgttggctggaagaacaaat -3′
Abca1	5′- ctggccaggatattcagcat -3′	5′- ccttggcaaagttcacgaat -3′
Apoe	5′- aaccgcttctgggattacct -3′	5′- agctgttcctccagctcctt -3′
Lpl	5′- aacattggagaagccattcg -3′	5′- tgctggggttttcttcattc -3′
Rps2	5′- tgttctccctgcccattaag -3′	5′- caagaccaacgtgaccattg -3′

The PCR reaction contained 10 µl volume, which included 5 µl of SYBR Green JumpStart Taq Mix (Sigma-Aldrich, St. Louis, MO), 4.8 µl first strand cDNA product described above (1:150 dilution), and 0.1 µM each of specific forward and reverse primers (Sigma Genosys, Houston, TX).
Cycling conditions were as follows: 2 min 95°C hold, followed by 40 cycles of 15 sec at 95°C, 1 min at 60°C, and 1 min at 72°C. Fluorescence was measured and acquired at 72°C.

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Zhou et al., Supplemental Table S3. Maximally expressed germ-cell specific and somatic-cell enriched genes.

Gene/Probe Sets	Expression in normal testis [a]	Expression in irradiated testis [a]	Ratio Irradiated /Normal testis	Reference[b]
Germ cell-specific genes				
Germ cell associated 1 (*Gsg1*)	56	n.d [c].	N/A [d]	[1]
Ornithine decarboxylase antizyme 3 (*Oaz3*)	52	n.d.	N/A	[2]
Outer dense fiber of sperm tails 2 (*Odf2*)	51	n.d.	N/A	[3]
Sperm mitochondria-associated cysteine-rich protein (*Smcp*)	50	n.d.	N/A	[4]
Outer dense fiber of sperm tails 1 (*Odf1*)	50	n.d.	N/A	[5]
Transition protein 1 (*Tnp1*)	47	n.d.	N/A	[6]
Cysteine-rich secretory protein 2 (*Crisp2*)	45	n.d.	N/A	[7]
Transition protein 2 (*Tnp2*)	42	n.d.	N/A	[6]
Heat shock protein, alpha-crystallin-related, B9 (predicted) (*Hspb9_predicted*)	41	n.d.	N/A	[8]
Chemokine-like factor super family 1 (*Cklfsf1*, now known as *Cmtm2a*)	41	n.d.	N/A	[9]
Somatic cell-enriched genes [e]				
Glutathione S-transferase A3 (*Gsta3*)	7	37	5.6	[10]
Beta-2 microglobulin (*B2m*)	3	32	12	[11]
Integral membrane protein 2B (*Itm2b*)	7	32	4.6	[12]

Hydroxyacid oxidase 2 (long chain) (*Hao2*)	2	31	18	[10]
Ribosomal protein S4, X-linked (*Rps4x*)	3	31	12	[13]
Claudin 11 (*Cldn11*)	6	31	5.2	[14]
Glutathione S-transferase, mu type 3 (*Gstm3*)	6	31	5.0	[10]
Prosaposin (*Psap*)	7	31	4.3	[15]
Insulin-like growth factor binding protein 7 (*Igfbp7*)	3	30	9.3	[16]
Cystatin 3 (*Cst3*)	5	30	5.7	[17]

[a] Ratio of expression levels relative to the median of all probe sets that were scored as "present" by Affymetrix criteria.

[b] References to the literature supporting the localization of the protein to specific testicular cell subtypes. The localization of numerous genes was determined from microarray analyses of separated testicular cell fraction in references [10, 18, 16] using the GermOnline systems browser (http://www.germonline.org) and references [19, 20] using the Mammalian Reproductive Genetics website (http://mrg.genetics.washington.edu).

[c] n.d., not detected, scored as "absent" by Affymetrix criteria.

[d] N/A, not calculated due to the absence of expression after irradiation.

[e] Somatic genes, selected based on >4-fold increased expression due to irradiation, were ranked according to expression level in irradiated testes.

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Zhou et al., Supplemental Table S4. Verification of elevated expression of LXR-target genes after irradiation.

Gene	Fold induction in expression after irradiation (X vs. C)--Microarray	Fold induction in expression after irradiation (X vs. C)—Real-time RT-PCR (n = 4)
Phospholipid transfer protein (predicted) (*Pltp*_predicted)	48 ± 4	18 ± 1
Cd36 antigen (*Cd36*)	36 ± 2	23 ± 3
ATP-binding cassette, sub-family A (ABC1), member 1 (*Abca1*)	24 ± 1	9 ± 1
Apolipoprotein E (*Apoe*)	11 ± 1	19 ± 2
Lipoprotein lipase (*Lpl*)	11 ± 1	31 ± 6

Note: Fold inductions are expressed as mean ± SEM.

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