

30	pgp-15	tccaatacaagtgggtgcaa	tcacagcgacatggtgattt	1194
31	F33E11.4	tgtaggagaagacgtgggct	tgctttgatcgcaattatcg	1191
32	F42A10.1	caacttctctcatgtgccga	gttggcatgagttccgagat	1184
33	pgp-4	ttggtcattctggatgtgga	cacagcagaggtaacagcca	1160
34	haf-2	ccttcgtccggtcataaaa	cccaactacacagcccaagt	1162
35	abt-3	acaaccattatgccccaaaa	tgaacgaacgagcaaaaactg	1115
36	F56F4.6	ctcaagtgatgcttgggtca	ggaattaaagggcagaggc	1110
37	haf-3	gacctccagaaccgaaacaa	atatcgagatatgcgccagc	1158
38	mrp-2	gacaattgctccgatggttt	caacagatattgggctgcct	1117
39	mrp-1	cctgttctccgtatgcaat	gaacgaaagagacaaaagccg	1193
40	pgp-1	ccgtagcatcccgaagataa	cgagattttgatcacgcca	1200
41	T02D1.5	left=aacaacctgatgacctcg	catttgaccccccaattcttg	1109
42	T10H9.5	atatcctccgagctctgcaa	cctacccttttccgtgtaa	1692
43	T17B5.1	aaaaaccgggagtttgcttt	acaagggtgcatctggaaac	1172
44	pgp-6	atctggtcgagttgggtacg	acagcaaacccttattatgc	1194
45	pgp-7	gcaatcgcaatcctttggtt	ccgaaacgtctatccaggaa	1109
46	pgp-8	ccgagactgaatgcaactgaa	tctcggtcgcaataggaaac	994
47	T26A5.1	ttccagatggcacacaaaa	cccgaaggtacaaaagacca	1187
48	T27E9.7	attgagcttgacgagcgagt	gacaacaatgccgtctgatg	1183
49	haf-4	aaaaccaccaaaccacaaa	tgttccgaagattttggagg	1175
50	W05E10.1	ccatacacaattgcttgatgaga	cacggtatgtattttggtcgtt	1179
51	W09D6.6,	tagaaccagatctacgggcaata	acaagcctctctagccttcttaa	2040
52	abt-4	tgctaaccggctcgttttct	agtatgtcagcggtcccac	1155
53	Y39E4B.1	tcttattcaatttcatcgcttt	atcatcttgatcatcgtcgttt	2723
54	Y42G9A.5	agacgaagatcataaacgcata	ttttcctgttttcatttgccta	2391
55	mrp-7	aaaccacccaataaaagaaaa	aactctgtcgaatttgcataaa	2129
56	Y47D3A.11	ttcatagttctcgccattccta	cttgggtgcttattttagggtt	2476
57	Y49E10.9	tcgatattcccttctccttaacc	attctacctagcacgaggtttcc	1528
58	Y50E8.m	tcaaaaatctccggataacaga	tttccatctcgaatgaagtaat	2452
59	abt-5	aaaaagacacttcaaagtgcagc	gagcaaaccgtcttacaacatc	1031
60	haf-8	ttgatcactggctgttcac	ccccatttgaacaggctta	1459
61	pgp-3	gtgcttctgcaagatgcaaa	gcttgcaaatgaactcgtga	1178
62	haf-9	cgttatcggcttgatttgg	cagcgtccaagcagatgta	1123

Table 2-3 Glutathione S-transferase (GST) に関連する遺伝子プライマー配列

No.	name	Forward primer	Reverse primer	primer
		Sequence 5'-3'	Sequence 5'-3'	
1	gst-1	gtccacttctcacattcgatttc	tgatgggaagcagagattcatt	943
2	gst-5	attgtttgtttgcaatccacttt	tctcgatccatttcttgattgt	1183
3	gst-9	agtgagaaatgagaaacgcagac	ctcatcgttccaagagtatg	2233
4	gst-9	tatttctaagagcagtgggcgag	tctcactctacaagaagtcgcc	
5	gst-4	catttggtttatcgctttgctac	ttagatagttcggcttcagga	1092
6	gst-8	caaccagttcattgaaacagaca	ttctgccgcaatttacattact	1128
7	gst-7	tcttcaataataatggcaagcgt	aaagagaccatgtgaattggaa	1580
8	gst-10	ccagttcactaggtcttcttca	agctactcccgttaagttgctttt	935
9	gst-3	tgttatcatgcggagtatcactg	ttcgaatttctcatttcatcgt	1054
10	gst-2	gaaaaacaaaatgaaatggctca	gtgaatgggttggtcgatataaa	1364
11	gst-6	atttcaatttaatcggcgaaat	tggacggttgcaatatactct	1465
12	cdr-1	cacattatgtcatcgggggtg	tgctcgcgaattgaagtatg	1555
13	C29E4.7	ttaaatctcccgaaaaccatctt	cggagtaacatcaaaagcaattc	1676
14	gst-30	ttagattgttcccgttttaagga	gcatttcaaatcacgtaagacc	1493
15	gst-42	gattgagtttggcatgaagagg	tagttcgacatcattccgtcttt	1860
16	gst-13	acgtttatgtacctgcctcgta	accaatatgtaattcctgaccga	1147
17	gst-11	caagaaaactgggaagaaggaat	tgctctccaaccactaattgat	1812
18	R11A8.5	gccaccattcagcaattttt	tgcttctttggctggattct	1179
19	gst-33	gtcttgtttccaaatatggcttg	ctattttccgtgcctagttgtg	1094
20	gst-12	atgvcgattattttggtttag	gaagcgaaccgagaattttatt	1960
21	gst-14	gagtattgacaaggacatttcgg	aacatgcctattgtgcctaccta	1693
22	gst-15	actgaaaaatcatatggagccct	tttccactcaatttgtcgattt	1516
23	gst-16	aaataaataaaaaatcatggcgca	tttctcatcaattcccactgact	1454
24	gst-18	caaattgacggaattgaaacatt	gagccaatcagacatttattcca	1191
25	gst-19	gccgaatattcattttaagccat	tgacagaattcaacaatcatgc	1692
26	K10F12.4a	ccggaaaattaggatttccatag	caactttggaagaatttgatgc	1884
27	gst-20	tttatgtctgatgggaaggaaaa	ccgccatatccaattacaaataa	1793
28	gst-21	aatgacaagatcagcccaagtaa	aatttttcgattttggaagaagc	1537
29	F13A7.10	aaaaatatcccatccaaggaaaa	caaaatatggcaatcccttcata	831
30	gst-22	aggttttgtaaagtgaaacgcaa	cgcgataagagtcatcgataaag	1359

31	gst-38	cacaatcagtttcccaataa	tcaattcagattctcaacggtt	807
32	gst-23	cttaccaagttgcagacagctt	tttattgttcccatttccactg	1625
33	gst-24	tgctactgtcaaaacctcttt	aacaatgccacaatacaagctct	932
34	gst-25	gactgggtgtttcataatcgctc	tttgtcatcatatttcaactgcg	2024
35	<u>gst-37</u>	gtttgttcatcattcttggtc	tcatcataaacgccttgaaaat	1463
36	gst-26	ttcacatctccattgattgttg	cagacagatcactatgccttct	999
37	gst-27	ctcaaccattctttattgctg	atccatttcttggttttggtt	839
38	gst-28	ggtgtgttgagaatgatgttga	taaaaagggttgcaaagtgtga	1414
39	gst-29	tatttgctatttccagaaaa	tacattcagcgagaaatcgaat	1651
40	gst-30	tgctctctctccttattccct	caaaaacttatgggacaacctga	967
41	gst-31	ttaacacgagctgcatactcaa	agtgaaccactatgccaacctta	1196
42	Y53G8B.1	tgaacttgctgaacaaacagaaa	gagtaattattggtagggcgctc	1165
43	gst-40	ttgcatcmetaacctccaaatac	tggaaacttttaagctgttga	1088
44	gst-41	aaatcgtcttccttaattgaca	taaccagataacgtcctgttctg	2296
45	gst-36	ggttcaataaagagtcgcagcta	atgcacgcttatgatagcatttt	1410
46	Y45G12C.3	tatccctactcgttttccatt	gggaaggatgagttgaattcttt	1657
47	gst-32	tatctggacgagtttaccctaa	ggcaaatattgggaaaagagatt	679
48	C02D5.3	attacaaaggacaagtccgaca	tctgcttcaatcttccaaaaag	2651
49	C25H3.7b	ctccactcgggataatagtgtg	acagtaaccacctgcacatttct	1983
50	K01D12.14	tttggccaatgcaacgtat	tatgctcttctcgcgagaca	1476
51	K01D12.13	cccggatatcaaaaactgga	tttggcttctgctgctgcta	1122
52	F17C11.9a	gctcttctctcggagctga	cgaagtctccctcccacata	1567
53	C54D10.2	aatctctttgcgaacacgct	attcgtgcaaaaccagaacc	909
54	C54D10.1	aatcatttcaaggcatcg	tggctttgtccatccaat	1110
55	F55A11.6	agttttggatcagcatggc	accatcatgtcaaatccggt	1063
56	C25H3.7a	ctccactcgggataatagtgtg	acagtaaccacctgcacatttct	1983
57	W10C8.4a	gaagagactcaaaagtctggcaa	ttcttgacggaacaaaagagttc	1517

Table 2-4 脂質代謝 (Lipid Metabolism :LM) 関連遺伝子群のプライマー配列

No.	name	Forward primer	Reverse primer	product
		Sequence 5'-3'	Sequence 5'-3'	
1	B0272.3	caagtgtctgctaacgccaa	gcgacttctccggatactg	990
2	B0303.3	cagcagtcacagtccgtgt	ctttcagaagatgctccgc	955
3	B0310.5	ttttgtgtcttcggattccc	cccatttgctgctccagtat	1686
4	B0395.2	tctctatttgacgtcccggt	gttccgccgaaaatgaagta	1433
5	C05C10.3	gcagccgatgtagatggttt	tctctcaaaaatatgggcgg	1165
6	C06B3.4	tctcggttgaaccttcgttt	ttcattctttgccagagcct	1050
7	C06B3.5	aaaagaaggctggtgcttca	attctggaacaatgccagc	979
8	C29F3.1	actgcttgctgtagcattgtg	tttggctttggaaaacatcc	1102
9	C37A2.3	cacctgcactgcacagttt	catcatgacctcatcgcaac	1159
10	C46F4.2	cattgcttgaccagcttta	gttggttagggctaggaggg	1137
11	C48B4.1	atacaacgcccacagatctc	tttgggtcaaacttggaac	1660
12	C50D2.7	gtccagtgggatctctcca	cacgacgtgtcagaaggaa	1184
13	C55B7.4	ggaggctctggatcctcttt	ccattgcagcttctctgaca	915
14	C56G2.6	ccggtggtgtctgaggtatt	tgcacctgcatctttctg	1150
15	D2063.1	cattcacacaattgtctctcca	tttgagtctttcgcaagtcctac	1009
16	E04F6.5	cttgaacagccaaccaat	gaccaattcgctgagctagg	1195
17	F01G10.2	tttcttatagccggagcgaa	ggctgtaattggaggtggaa	1055
18	F01G10.3	tcacgtgctccaccactatga	gctcgggaaaaatcattcaa	1194
19	F01G4.2	ttccgtcttagtgcagatcttg	ttctgtgagctcggttctaag	2618
20	F08A8.1	gcacagatttatgggggaga	tgatctttgcatgtggtggt	1199
21	F08A8.2	cgatttccgtcaagagcttc	atgggaatagacgatgctgc	1162
22	F08A8.3	gtcaaagaatgaaccgcat	catgttcaccacaagccatc	927
23	F08A8.4	tagttggagatattggcccg	aaggggaccgctagtaagga	1123
24	F08F8.2	tgaaaatcaagatcgggctc	cttttccggagagaaggct	1077
25	F09E10.3	aaaacaaaaagagccaattttc	agttttgttaaccttctgtgcaa	2252
26	F10G8.9	cagatataaaatgcgtggaggag	tgctcatatgaaacgatcgagta	1687
27	F11A5.12	tcgtgtcttctgtccaaacg	cattgctggggtgatagctt	1106
28	F19H6.4	ttttgactctcccctcct	gggttgacgggtgactagaa	1605
29	F25B4.6	gctgacgctagaccacttcc	gcaacagcaaatgggattct	1191
30	F25C8.1	atgcaaatcgggtagcaaaag	gctcggcgagaagtagaaaa	1116

31	F25G6.5	tacctttccatgatcctttcaga	catttctacatctcgggagttg	1607
32	F28F8.2	tgagaaatgcaccacgatgt	ttgtgagaggggaattcggac	1078
33	F32H2.5	agcttcgtagaacaacactggag	ttattggaatcaactctttcggga	1153
34	F35H8.6	tgaacagtgaaccagtgga	ccttttcagtccgacatcgt	1062
35	F37C12.7	acccttgacacttcacgacc	cttctggtaggccatttgga	1151
36	F38H4.8	tcgtttgtgtgctcgaagtc	tttcagggaaactcgggtg	1049
37	F42F12.3	gcacacacaaccagtgacc	tcaacggaatgtgagtgag	1336
38	F43H9.1	gcaaacgattatfttcaactgc	ctttcagcagcactttgtact	847
39	F46E10.1	ggaaactcaaccagatgactcac	aacatfttctctgaatttgca	1182
40	F47G6.2	aaagaaattctggaagtttggc	cagtttatcagggaccaactcag	2281
41	F53A2.7	cctatcttatcgcccaaca	cgacagcagaataggcaaca	1149
42	F54C8.1	tgccaattcgatagctcctt	ccactggaattgtgttcgtg	1189
43	F54D5.7	ggagacaaaggccacgtaag	cttgcaagtcattgctgaaa	1146
44	F54D8.3	gggagtctcgggacagatta	cagggaaagcgaatcaaa	1159
45	F56B3.5	ttggttttcagtaggtggagaa	ggttttcatcgaagattgactg	2232
46	F59F4.1	agggtagacgtttccgtcac	gtcaccgagcagcttacaca	910
47	K04F1.15	ttgggtgttcctgttttcttta	accagattgcataacggtgaat	1099
48	K05F1.3	agctgctccgatctgtttgt	atftttccgctttcctgtga	1186
49	K06A5.6	aaacgccgtaggagatgattatt	cgagattccagaaaagtatgggt	1131
50	K07B1.2	ctgaatatttcaggggcaaa	tgagcttcttcgggacttgt	1138
51	K12G11.3	acgtatggctcggagatttg	acggcacgagagttgatctt	972
52	K12G11.4	gagaatccagcaatttccga	atcgccgtctacatattgcc	1115
53	R06C1.2	attatcggcttctggtgattttt	ttcgttcgttcagattcaaat	2263
54	R06F6.9	ccgcaagtgtaatgctgcaa	taatcctttgcagtttgggc	962
55	R07C3.4	gagccaagtgcaggataagc	tgggagtgagatgtatggca	995
56	R07H5.2	gatggtggacttttcgcaat	gagttggttggctcaatcgt	890
57	R09B5.6	cgttttctgccaagctttc	ccacaaaacatggtgcaatc	1108
58	R09E10.3	tgttccaccaaccagaaa	ctggatctgggacaacgatt	1124
59	R09E10.4	ttaagacctcactcgcggtt	gatcacctcgagaaaacca	1182
60	T02G5.4	aagccgagttcaattcagga	ttttgatgaaagcaagggg	1089
61	T02G5.7	cagtctatcgcaatgtcgga	tcgctactgcacctcctttt	1142
62	T02G5.8	cttctgggctgaaagcaatc	aaccattccacttgagccac	1153
63	T04H1.7	ggggccacaatgttgaagt	ggcatcaaaaacgaaggtgt	1020
64	T04H1.8	tcgttccaatgcactcacc	cattcggttccagtcctgtt	1141

65	T05G5.6	aaaagcggtcattccttct	gcattttcaagcaaagctcc	1075
66	T07C5.1b	aaagaagtgagttccgattttcc	agacaacgaaattaaggaggag	1664
67	T08B1.6	caactgcaagctggaaatca	tccgtctgtccataaccctc	1604
68	T08G2.3	gtcagcaagcatgaactgga	agcgaaacccaaaaggagat	1065
69	T10E9.9	tccgtgttgcttcatacgag	acgttttcgatgctgctct	1198
70	T25G12.5	aagttccctcgtagattggaag	catttcttgagtacaccacc	2277
71	W09B6.1	cacaatattgcgttcacgg	tcatggcgatcctcttatcc	1195
72	Y38F1A.6	gagtgtgataatttcacgatcc	tcgaagcaattcgatagtttcat	1147
73	Y65B4BL.5	aaggtgagggaaaatggaaataa	accggttcaatacatttgtgac	928
74	Y69F12A.2	agtaagcaactttccgctttt	atacaatttcacgtccatgtcc	2446
75	Y76A2B.3	agcgatgagccatctgaagt	acgtcaggaaccactggaac	1132

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Table 2-5 Vitellogenin (VIT) 遺伝子群プライマー配列

No.	name	Forward primer	Reverse primer	product
		Sequence 5'-3'	Sequence 5'-3'	
1	K09F5.2 (vit-1)	catgcttgctttgtggagaa	tttgagaatcctgggaaacg	1128
2	C42D8.2 (vit-2)	aaattgttgcccaactccag	gttcaacaaaacccttcgga	1186
3	F59D8.1 (vit-3)	tcaaaactccccgtttctgac	tgagcacattgctgaccttc	1110
4	F59D8.c (vit-3)	attgtctctctcaccgctcattgt	tactcccaactccacttttcaa	2434
5	F59D8.f (vit-3)	tccagagacctgaaaatttgtgt	atggtgctccgataaagtcaaaa	1113
6	F59D8.a (vit-3)	gaatctcaatggagtgaggagac	gagatgagccaagatcagaaaga	2384
7	F59D8.2 (vit-4)	tcttctgttggaagtcttctcg	agatggactacatcgttctcca	2493
8	F59D8.d (vit-4)	ttgggtaagagtttcttgaca	acatgtatcttcaattgctgct	1564
9	F56B6.1 (vit-4)	cgcattcctgaaaacgaaat	caaggctgctcgtcttaacc	922
10	C04F6.1(vit-5)	ccaacaaacctgggaaaaga	ttggtgcaaagctgtgttc	1196
11	K07H8.6 (vit-6)	caatcaatgttgaaccacgc	ctcctccatttgggtggt	1170

Table 2-6 核内レセプター(NHR)プライマー遺伝子

No.	name	Forward primer	Reverse primer	product
		Sequence 5'-3'	Sequence 5'-3'	
1	nhr-8	aatgccatcgcaatcctc	gcccttgacttttgtgcaat	1152

Table 2-7 内部標準遺伝子プライマー

No.	name	Forward primer	Reverse primer	product
		Sequence 5'-3'	Sequence 5'-3'	
1	act-1	tccccacgtgttctgtgta	tagatcctccgatccagacg	1199
2	act-2	atntaaatcggggtgtgaaaat	tttgaccgattggaaatagttgt	1116
3	act-3	ttgttattgccccaaaagg	gtcggatgggacagaagga	1195
4	act-5	cctgcttgagatccacatt	caccagttctccttaccga	1166
5	ama-1	ggacgacgtgtcctacgat	gttggcgaataactgggaga	993