

Comparative proteomic and transcriptomic approaches to address the active role of GA₄ in Japanese apricot flower buds dormancy release

Weibing Zhuang, Zhihong Gao, Liangju Wang, Wenjun Zhong, Zhaojun Ni, Zhen Zhang

Supplementary material

Supplementary Table S1 Specific primers used in relative quantitative real-time RT-PCR.

Gene name	Accession	Forward primer Sequence (5' to 3')	Reverse primer Sequence (5' to 3')
beta-galactosidase	ppa020752	ACGAAGACTTTTGCTATCCG	AAATCATACTGGCGACGAAC
histone superfamily protein	ppa013173	GCTCCCATTTTCAGCGTTTG	ATGATGGTGACCCTCTTGG
beta-amylase 6	ppa004334	GCTCAGGTATCCCTCTTAT	TCAGGAGCGTCATTGTATT
tubulin beta 8	ppa004884	GTCAATCTGGTGCTGGAAAC	ATACACTCGTCTGCGTTCT
glutathione S-transferase TAU 10	ppa025728	GCAAGCCAATCGCAGAATC	CACCACAATACCCAGAAAGC
aldehyde dehydrogenase 3I1	ppa005609	AACGAGGCACTGAAAGAAT	TCTTATCCCACTTCTGCTCT
ATPase, F1 complex, OSCP/delta subunit protein	ppa1027122	AACTGGGTATGCCGCTGCTC	CCAAATGCCTATTGAATCTCCCT
chitinase A	ppa026927	TGGACGGCATAGATTTCAACAT	TGTAGTCAGACAACCTCCT
gibberellin-regulated family protein	ppa024899	CTTGGCTCCTCTTTGATGG	CTTGAACCTCTGCTACTGC
actin-related protein 5	ppa002045	TATCTGTCCTGGATTTACC	AACAGTGCTCCATCTTCAGGT
dormancy-associated protein-like 1	ppa013510	GATGACATTGTTGCTGGAC	TTAGCGATGCTTGCTCCTGGTC
late embryogenesis abundant protein (LEA) family protein	ppa011378	CAGTATCAGTAGCCTCGTT	CCCAATGTTCTGTTCCCTC

Supplementary Table S2 The matched peptide sequences and corresponding m/z ratio of the 42 identified proteins in our study.

^a Spot No	^b NP	^c Matched peptide sequences	corresponding m/z ratio
1	4	K.ITFGEGSQYGYVK.H	1448.7163
		K.KITFGEGSQYGYVK.H	1576.8153
		K.HSEILEGDGGPGTIKK.I	1637.8595
		M.GVFTYESEFTSEIPPR.L	1955.9763
2	3	K.AIDERSEQIR.S	1216.6252
		R.NVVIEQSFQAPK.V	1288.6797
		R.GYISPYFITNQK.N	1430.7239
3	4	K.SVAAGMNAMDLRR.G	1391.6783
		R.GYISPYFITNPK.N	1399.7144
		K.TLYNELEVVEGMKLDLDR.G	1908.9644
		K.QVANATNDAAGDGTTCATVLTR.A	2207.0308
5	2	K.RPDLVQAR.I	954.5444
		R.AINGAVECDGKRPDLVQAR.I	2069.0476
6	5	A.AKITFTNK.C	922.5299
		K.GSDGSVIACK.S	993.4805
		K.ASTCPADVNAVCPAELQVK.G	2087.0239
		K.IFKDQCPQAYSAYDDK.S	2111.9314
		K.SACLALNQPQYCCTPPNDKPETCPPTEYSK.I	3560.5208
8	8	K.GQHPLFPR.I	951.5095
		K.GTFYGNYPKPR.S	1174.5764
		K.THPVNFLNER.T	1226.6185
		K.AFDLMLSGQSIR.C	1337.6759
		R.IIGVDLNSNRFEEAK.K	1714.8999
		R.IIGVDLNSNRFEEAKK.F	1842.991
		K.KGSSVAIFGLGAVGLAAAEGAR.V	2002.094
		R.AAVAWAAGKPLSIEEVEVAPPQKEEVR.L	2932.5415
9	6	K.TASGKPFVDVLK.E	1261.7113
		K.ASPEVIAEYTVR.A	1334.6919
		K.KASPEVIAEYTVR.A	1476.7981
		K.GILAADESTGTIGKR.F	1488.7963
		R.FASINVENVESNRR.A	1634.8182
		K.IGPNESQLSINENANGLAR.Y	2094.0491
10	2	K.VKDGVPHLTK.V	1093.6373
		R.GGVIDEDALVR.A	1143.6039
11	7	R.AMLNLR.A	959.5358
		K.YVPYVADSKR.A	1197.6284
		K.VVVLWTANTER.Y	1287.7068
		R.VGSFNGEEIYAPFK.S	1557.7574
		MFIESFKVESPNVK.Y	1654.8512

		K.VQQANYFGSLTQASSIR.V	1869.9457
		K.DKVQQANYFGSLTQASSIR.V	2113.0713
12	3	K.FFVGGNWK.C	954.4681
		K.VIACVGETLEQR.E	1374.6797
		K.DSLKPDFHVAAQNCWVK.K	2014.9623
13	5	R.ALRLDLR.I	985.5793
		K.TFQGPPHGIQVER.D	1465.7632
		K.DFQGPPHGIQVER.D	1479.7694
		K.YGRPLLGCTIKPK.L	1502.8491
		R.LTYYTPDYETKDTDILAAFR.V	2396.1619
15	4	R.QKNHGMHFR.V	1154.5646
		R.MSGGDHIHAGTV	1465.7179
		R.MSGGDHIHAGTVVGKLEGER.E	2050.0146
		R.EITLGFVDLLRDDFVEQDR.S	2280.2031
16	2	R.LTGKHETADINTFK.W	1574.8241
		K.HKEHIAAYGEGNER.R	1610.7733
17	2	K.EIAFDAIDKAPEEK.A	1575.798
		R.HYAHVDCPGHADYVK.N	1768.7843
18	7	R.QVLTYSGER.K	965.5047
		R.KPVEHFLK.T	997.5815
		K.AAVLMNLESR.M	1103.5939
		R.EVEAIGGHIGASASR.E	1453.7429
		K.TYVPQMVELLVDAVR.N	1732.9276
		R.NPAFLEWEVNEELKK.V	1845.9386
		R.LNGSVLEDFVAENYAR.R	1897.9318
19	8	R.VSYDLANNR.V	1051.5182
		R.LQTEAYNSLR.D	1194.6116
		R.VETFYYVGLK.G	1218.6416
		K.ATSFSYCLVNR.D	1317.6285
		R.VQVPTVSFLFADGK.S	1507.8143
		K.DSRVETFYYVGLK.G	1576.8075
		E.DLSTPVVSGVSQSGGEYFTR.I	2086.0222
		R.DLPSASGFALFDTCYDLSSR.S	2294.0381
20	5	K.TVFASATER.D	981.4905
		K.HLIYQHQNK.Q	1317.6709
		K.GCVFTYDAVGSYER.V	1623.6991
		K.LADKAVLASSGFQADVK.A	1719.9153
		R.VGYSSQSGSTLIIPFLDNQLK.S	2324.1978
21	4	K.LGEIDQVTQR.R	1146.5801
		R.FLCGSVGALVENGKR.L	1606.8414
		R.LLALDGSVLPVVFER.A	1627.9449
		R.LLALDGSVLPVVFERA	1698.9852

22	7	K.SIHDFTVK.D	946.5182
		K.GKDVDLSIYK.G	1137.6353
		K.SIHDFTVKDAK.G	1260.6759
		R.YAPTTTPLSIEK.D	1306.7079
		K.FLVDKEGNVVDR.Y	1390.7523
		R.YAPTTTPLSIEKDVKK.L	1776.9961
		R.FKAEYPIFDKVDVNGDNAAPIYK.F	2601.3875
23	6	K.ALEQLHDAIAK.G	1208.6426
		K.YASEVYEKESP	1301.5703
		K.HHQTYVTNYNK.A	1404.6464
		K.FNGGGHVNHSIFWK.N	1599.7581
		K.KLVVETTANQDPLVTK.G	1755.9645
		K.ALEQLHDAIAKGDAAAVVK.L	1920.0295
24	6	R.EDKPEPPPEGR.L	1250.5913
		K.GNDHLRDVFGK.T	1257.6204
		R.IAWHSAGTYDSR.T	1335.618
		K.HAAEQSHGANAGLDIAVR.L	1816.8868
		K.YAADEDAFFADYAAAQR.L	2031.8658
		K.TMGLSDQDIVALSGGHTLGR.C	2043.9987
25	6	R.EDKPEPPPEGR.L	1250.6213
		K.GNDHLRDVFGK.T	1257.6552
		R.IAWHSAGTYDSR.T	1335.6538
		K.HAAEQSHGANAGLDIAVR.L	1816.9325
		K.YAADEDAFFADYAAAQR.L	2031.9215
		K.TMGLSDQDIVALSGGHTLGR.C	2044.0458
26	7	K.ACAPMLR.I	947.4691
		K.GNDHLRDVFGK.T	1257.6155
		R.IAWHSAGTYDSR.T	1335.6106
		M.GKSYPTVSEEYK.K	1515.7434
		K.HAAEQSHGANAGLDIAVR.L	1816.8796
		K.YAADEDAFFADYAAAQR.L	2031.8593
		K.TMGLSDQDIVALSGGHTLGR.C	2043.9905
27	3	R.VVSCSDITALAAR.D	1362.6897
		K.VFKEDIGQAAGLLR.L	1516.8337
		R.DSVFLSGPDYDVPLGR.K	1793.8508
28	2	K.NLTHGAPPEDEIR.H	1351.6661
		R.HAGDLGNIVANADGVAEATIVDNQIPLTGPNV IGR.A	3552.9392
29	4	K.VRDSLDTTK.L	1034.5638
		K.KAQDEVLVISGIK.Y	1399.828
		K.ATVSSADLTTNFPATLTDITVEVAR.T	2694.457
		R.KATVSSADLTTNFPATLTDITVEVAR.T	2822.5479
30	7	K.ACAPMLR.I	945.5106

		R.EDKPEPPPEGR.L	1250.6094
		K.GNDHLRDVFGK.T	1257.6443
		R.IAWHSAGTYDSR.T	1335.6427
		K.HAAEQSHGANAGLDIAVR.L	1816.9215
		K.YAADEDAFFADYAAAHR.L	2031.9071
		K.TMGLSDQDIVALSGGHTLGR.C	2044.0356
31	8	K.EIVDLCLDR.I	1132.5597
		R.LVSQVISSLTASLR.F	1473.8507
		R.SLDIERPTYTNLNR.L	1691.8628
		R.AIFVDLEPTVIDEVR.T	1715.9087
		R.AIFVDLEPTVIDEVR.T	1729.9193
		K.TVGRGDDAFNTEFFSETGAGK.H	2076.9524
		R.QLFHPEQLISGKEDAANNFAR.G	2368.1829
		R.QLFHPEQLISGKEDAANNFAR.G	2385.1914
32	7	R.AVFPISVGRPR.H	1198.7482
		K.GEYDESGPSIVHR.K	1445.6742
		K.NYELPDGQVITIGAER.F	1774.9039
		R.VAPEEHPVLLTEAPLNPK.A	1954.0725
		K.DLYGNIVLSGGSTMFPGIADR.M	2183.0947
		K.SSSSVEKNYELPDGQVITIGAER.F	2479.2507
		R.TTGIVLDSGDGVSHTVPIYEGYALPHAILR.L	3151.699
33	2	R.SIVFKIEEK.Q	1092.6321
		R.IFFIAWSPDTSR.V	1439.7449
35	6	A.KVFFEER.F	954.5153
		R.FEDGWDKR.W	1052.4905
		R.WVTSEWKK.E	1063.5643
		K.YVGIELWQVK.S	1266.6836
		K.HEQKLDCCGGYIK.L	1504.7363
		K.SGTLFDNILITDEPEYAK.Q	2026.0276
36	6	K.YLPHSEQK.S	1001.4897
		R.RQAQLKPETAPK.L	1366.7649
		K.AIITHQLQSLKR.E	1393.8146
		K.LQAALPGLPQELIK.E	1490.8678
		K.EIGLTVVYVAQLLR.R	1576.8484
		R.SYDPNLIQDPTIYR.L	1694.8157
38	8	K.STSHYHTK.G	972.4933
		K.AFVLDADNLVPK.I	1301.7198
		K.ITFGEGSQYGYVK.H	1448.7163
		K.HSEILEGDGGPGTIK.K	1509.7646
		K.KITFGEGSQYGYVK.H	1576.8123
		K.HSEILEGDGGPGTIKK.I	1637.8595
		M.GVFTYESEFTSEIPPR.L	1955.9546

		M.GVFTYESEFTSEIPPPR.L	1969.9675
39	6	R.TIERPEYK.Y	1035.5544
		R.QPGPIPGLNTK.I	1121.6323
		K.GGNVTREPGPVK.G	1210.6584
		K.ITSFLDPDGWK.T	1278.6406
		K.ITRQPGPIPGLNTK.I	1491.8674
		K.SAEVVNLVTQELGGK.I	1543.8413
40	7	K.ITITNDKGR.L	1017.5773
		K.NALENYAYNMR.N	1358.6285
		K.NALENYAYNMR.N	1374.6219
		K.STVHDVVLVGGSTR.I	1426.782
		K.MDKSTVHDVVLVGGSTR.I	1800.9454
		K.VQQLLQDFNKGELCK.S	1967.0206
		K.EQVFSTYSNQPGLIQQVYEGER.T	2658.3003
41	5	K.HLNITLTR.S	967.5748
		R.EAELHAQKDQER.K	1453.7051
		R.SKFEVLNHLIER.T	1571.8561
		R.QAVTNPTNTVFGTR.L	1633.8667
		K.GVNPDEAVAMGAAIQGGILR.G	1939.0106
42	5	R.ALRLDLR.I	985.5885
		K.DTDILAAFR.M	1021.5345
		K.TFQPPHGIQVER.D	1465.7737
		K.LTYYPDYETKDTDILAAFR.M	2396.1758
		R.MTPQGVPPPEAGAAVAESSTGTWTTVWTDG LTSLDR.Y	3854.9519
43	8	K.IGLFGGAGVGK.T	975.5593
		K.THDFLPIHR.E	1135.6067
		K.VVDLLAPYQR.G	1173.6659
		K.AHGGFSVFAGVGER.T	1390.6832
		R.VGLTGLTVAEHFR.D	1399.7695
		K.VLNTGSPITVPVGR.A	1409.8174
		R.FTQANSEVSALLGR.I	1492.7762
		R.IPSAVGYQPTLATDLGGLQER.I	2186.1545
44	6	K.DPGQNPFSFQIGK.G	1448.7648
		K.GWDEGLVLMQVGEVAR.L	1773.8798
		K.GWDEGLVLMQVGEVAR.L	1789.875
		K.GAVIKWDEGLVLMQVGEVAR.L	2242.1946
		K.GAVIKWDEGLVLMQVGEVAR.L	2258.1819
		R.EVVSAGTGPKPTVGQKVTVHCTGYGK.N	2657.3752
45	5	K.AGINVIQIDEAALR.E	1482.845
		K.YGAGIGPGVYDIHSPR.I	1658.8521
		K.SEQAFYLDWAVHSFR.I	1855.8909
		R.KSEQAFYLDWAVHSFR.I	1983.9888

		R.EGVKYGAGIGPGVYDIHSPR.I	2072.0857
46	8	K.AFFDSTGGLWR.T	1256.6001
		K.GGSPYGAGTYAGDGTR.Q	1486.644
		R.QPSELELQQAFHQGK.Y	1722.8302
		R.QPSELELQQAFHQGK.Y	1739.8549
		K.VYIVYYSMYGHVEK.L	1750.8378
		K.VYIVYYSMYGHVEK.L	1766.8293
		K.SEVPIISPNDLSEADGLLFGFPTR.F	2574.2896
		K.SEVPIISPNDLSEADGLLFGFPTR.F	2588.301
47	5	M.ASAEIEFR.C	964.4606
		K.IINDRETGR.S	1073.5573
		R.GFGFVTFSNEK.A	1232.5844
		R.AFSPFGEIIESK.I	1324.6638
		R.CFVGGLAWATDNDALER.A	1894.8655

^a Numbering corresponds to the 2-DE gel in Fig. 2.

^b The total number of peptides identified.

^c The sequences of matched peptides identified.

Supplementary Table S3 Three replicates data sets of protein spot expression value in control, G10 and W10 in our study.

^a Spot No	control (1)	control (2)	control (3)	control (average)	G10 (1)	G10 (2)	G10 (3)	G10 (average)	W10 (1)	W10 (2)	W10 (3)	W10 (average)
1	8.31	8.31	8.31	8.31	2.44	2.46	2.45	2.45	3.30	3.28	3.29	3.29
2	0.65	0.65	0.65	0.65	1.89	1.90	1.91	1.90	1.11	1.11	1.11	1.11
3	1.35	1.35	1.35	1.35	3.47	3.49	3.54	3.50	1.43	1.46	1.40	1.43
4	0.31	0.32	0.27	0.30	2.80	2.80	2.80	2.80	0.36	0.36	0.36	0.36
5	0.32	0.30	0.28	0.30	5.80	6.30	6.20	6.10	0.27	0.26	0.31	0.28
6	1.80	1.80	1.80	1.80	12.60	12.60	12.60	12.60	2.23	2.23	2.23	2.23
7	7.95	7.93	7.97	7.95	1.90	1.90	1.90	1.90	5.67	5.67	5.67	5.67
8	5.48	5.43	5.44	5.45	14.99	14.99	14.99	14.99	14.30	14.31	14.23	14.28
9	2.64	2.66	2.65	2.65	8.05	8.05	8.05	8.05	5.00	5.00	5.00	5.00
10	2.85	2.84	2.86	2.85	7.18	7.18	7.18	7.18	3.43	3.43	3.43	3.43
11	1.96	1.96	1.96	1.96	0.73	0.78	0.80	0.77	1.83	1.83	1.83	1.83
12	4.13	4.13	4.13	4.13	10.49	10.49	10.49	10.49	5.01	5.12	5.08	5.07
13	1.90	1.63	1.72	1.75	8.88	9.00	8.77	8.85	2.03	1.90	1.86	1.93
14	0.00	0.00	0.00	0.00	2.85	2.85	2.85	2.85	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	6.65	6.65	6.65	6.65	0.00	0.00	0.00	0.00
16	2.20	2.20	2.20	2.20	5.36	5.34	5.35	5.35	2.03	2.03	2.03	2.03
17	0.85	0.85	0.85	0.85	2.30	2.23	2.22	2.25	0.96	0.96	0.96	0.96
18	0.76	0.76	0.76	0.76	2.04	2.04	2.04	2.04	0.83	0.83	0.83	0.83
19	1.23	1.22	1.24	1.23	3.51	3.51	3.51	3.51	1.50	1.51	1.52	1.51
20	0.75	0.75	0.75	0.75	2.55	2.55	2.55	2.55	0.82	0.82	0.82	0.82

21	0.00	0.00	0.00	0.00	5.85	5.85	5.85	5.85	0.00	0.00	0.00	0.00
22	2.55	2.55	2.55	2.55	5.80	5.80	5.80	5.80	2.60	2.61	2.62	2.61
23	5.80	5.80	5.80	5.80	15.07	15.09	15.08	15.08	14.61	14.62	14.63	14.62
24	4.25	4.25	4.25	4.25	1.95	1.95	1.95	1.95	4.32	4.34	4.33	4.33
25	8.39	8.13	8.08	8.20	1.13	1.17	1.15	1.15	8.39	8.31	8.32	8.34
26	1.25	1.25	1.25	1.25	7.55	7.55	7.55	7.55	2.03	2.03	2.03	2.03
27	0.30	0.30	0.30	0.30	2.31	2.29	2.30	2.30	0.35	0.35	0.35	0.35
28	1.55	1.55	1.55	1.55	4.20	4.25	4.15	4.20	3.33	3.33	3.33	3.33
29	0.73	0.83	0.69	0.75	2.27	1.96	1.92	2.05	0.80	0.74	0.74	0.76
30	9.85	9.85	9.85	9.85	1.05	1.04	1.06	1.05	2.26	2.22	2.27	2.25
31	0.10	0.12	0.14	0.12	0.42	0.43	0.44	0.43	0.11	0.11	0.11	0.11
32	8.45	8.45	8.45	8.45	30.67	30.68	30.66	30.67	8.44	8.44	8.44	8.44
33	0.96	0.94	0.95	0.95	2.40	2.40	2.40	2.40	0.86	0.87	0.88	0.87
34	0.75	0.75	0.75	0.75	3.44	3.45	3.46	3.45	0.73	0.73	0.73	0.73
35	27.80	28.10	27.50	27.80	10.45	10.45	10.45	10.45	25.30	25.30	25.30	25.30
36	1.31	1.23	1.21	1.25	3.35	3.35	3.35	3.35	3.12	3.12	3.12	3.12
37	0.00	0.00	0.00	0.00	16.20	16.20	16.20	16.20	0.00	0.00	0.00	0.00
38	1.75	1.75	1.75	1.75	1.84	1.85	1.83	1.84	4.81	4.81	4.81	4.81
39	4.65	4.65	4.65	4.65	4.73	4.73	4.73	4.73	1.44	1.43	1.42	1.43
40	0.31	0.31	0.31	0.31	0.46	0.40	0.40	0.42	0.94	0.91	0.91	0.92
41	1.64	1.62	1.63	1.63	1.57	1.60	1.60	1.59	4.74	4.74	4.80	4.76
42	8.34	8.34	8.34	8.34	8.51	8.60	8.60	8.57	21.14	21.20	21.20	21.18
43	0.91	0.97	0.97	0.95	0.83	0.83	0.83	0.83	2.40	2.39	2.41	2.40

44	1.15	1.15	1.15	1.15	1.23	1.23	1.23	1.23	3.34	3.35	3.36	3.35
45	0.80	0.80	0.80	0.80	0.74	0.74	0.74	0.74	2.26	2.26	2.26	2.26
46	0.71	0.73	0.75	0.73	0.75	0.84	0.84	0.81	1.85	1.85	1.85	1.85
47	1.21	1.21	1.21	1.21	1.33	1.33	1.33	1.33	2.95	2.95	2.95	2.95
48	2.45	2.45	2.45	2.45	2.37	2.37	2.37	2.37	0.96	0.96	0.99	0.97

^a Numbering corresponds to the 2-DE gel in Fig. 2.

Supplementary Table S4 Summary statistics of DGE tags in Japanese apricot after GA₄ treatment in control and A libraries.

Summary		Control	A
Raw Data	Total	3620084	3451950
	Distinct Tag	390999	375393
Clean Tag	Total number	3391578	3244431
	Distinct Tag number	163411	168839
All Tag Mapping to Gene	Total number	693822	732349
	Total % of clean tag	20.46%	22.57%
	Distinct Tag number	28165	30199
	Distinct Tag % of clean tag	17.24%	17.89%
Unambiguous Tag Mapping to Gene	Total number	688544	725107
	Total % of clean tag	20.30%	22.35%
	Distinct Tag number	27896	29900
	Distinct Tag % of clean tag	17.07%	17.71%
All Tag-mapped Genes	number	12757	13340
	% of ref genes	44.45%	46.48%
Unambiguous Tag-mapped Genes	number	12578	13137
	% of ref genes	43.82%	45.77%
Mapping to Genome	Total number	1812504	1603808
	Total % of clean tag	53.44%	49.43%
	Distinct Tag number	69110	73506
	Distinct Tag % of clean tag	42.29%	43.54%
Unknown Tag	Total number	885252	908274
	Total % of clean tag	26.10%	27.99%
	Distinct Tag number	66136	65134
	Distinct Tag % of clean tag	40.47%	38.58%

Supplementary Table S5 The up-regulated and down-regulated genes in Japanese apricot after GA₄ treatment (10 days).

Gene	log ₂ Ratio(A/Control)	P-Value	FDR
ppa020752m PACid:17666384	12.882452	7.11E-77	1.00E-74
ppa005526m PACid:17648635	12.87670878	1.45E-76	1.98E-74
ppa010862m PACid:17653615	12.55314928	2.46E-61	2.47E-59
ppa006857m PACid:17658300	12.48507456	1.54E-58	1.47E-56
ppa007395m PACid:17655705	12.19383333	5.67E-48	4.23E-46
ppa016543m PACid:17650738	12.01192607	2.22E-42	1.47E-40
ppa005563m PACid:17664224	11.82853321	2.09E-37	1.24E-35
ppa017189m PACid:17653044	11.60408986	4.01E-32	2.01E-30
ppa020405m PACid:17657243	11.01192607	1.47E-21	5.29E-20
ppa004774m PACid:17641694	10.92332749	2.58E-20	8.64E-19
ppa010650m PACid:17665966	10.75321675	3.87E-18	1.18E-16
ppa003587m PACid:17656052	10.70043972	1.62E-17	4.72E-16
ppa025313m PACid:17657410	10.70043972	1.62E-17	4.71E-16
ppa010476m PACid:17651721	10.50084188	2.42E-15	6.30E-14
ppa019741m PACid:17655782	10.50084188	2.42E-15	6.28E-14
ppa009870m PACid:17645209	10.46964182	4.95E-15	1.26E-13
ppa021935m PACid:17666610	10.46964182	4.95E-15	1.26E-13
ppa017962m PACid:17665879	10.43775207	1.01E-14	2.51E-13
ppa010314m PACid:17641658	10.43775207	1.01E-14	2.51E-13
ppa012971m PACid:17658092	10.40514146	2.07E-14	5.08E-13
ppa010893m PACid:17642568	10.15481811	3.10E-12	6.49E-11
ppa001782m PACid:17646120	9.990103964	5.43E-11	1.04E-09
ppa005532m PACid:17658974	9.700439718	3.98E-09	6.47E-08
ppa021285m PACid:17656504	9.59058705	1.66E-08	2.52E-07
ppa007744m PACid:17644219	9.531381461	3.40E-08	4.99E-07
ppa004903m PACid:17666247	9.469641817	6.96E-08	9.80E-07
ppa000618m PACid:17643020	9.469641817	6.96E-08	9.79E-07
ppa027202m PACid:17655696	9.469641817	6.96E-08	9.78E-07
ppa023842m PACid:17665296	9.405141463	1.42E-07	1.93E-06
ppa008418m PACid:17642361	9.337621902	2.91E-07	3.80E-06
ppa002104m PACid:17652890	9.337621902	2.91E-07	3.79E-06
ppa012381m PACid:17651185	9.337621902	2.91E-07	3.79E-06
ppa018651m PACid:17668648	9.266786541	5.96E-07	7.45E-06
ppa008559m PACid:17650323	9.266786541	5.96E-07	7.44E-06
ppa010698m PACid:17641243	9.194756854	1.22E-06	1.45E-05
ppa008126m PACid:17648010	9.194756854	1.22E-06	1.45E-05
ppa024800m PACid:17653974	9.194756854	1.22E-06	1.44E-05
ppa003158m PACid:17660551	9.194756854	1.22E-06	1.44E-05
ppa014802m PACid:17663559	9.194756854	1.22E-06	1.44E-05
ppb011302m PACid:17662919	9.116343961	2.49E-06	2.80E-05

ppa023999m PACid:17650179	9.116343961	2.49E-06	2.80E-05
ppa012371m PACid:17656309	9.116343961	2.49E-06	2.79E-05
ppa020043m PACid:17657409	9.116343961	2.49E-06	2.79E-05
ppa004709m PACid:17649321	9.116343961	2.49E-06	2.79E-05
ppa022961m PACid:17645522	9.116343961	2.49E-06	2.79E-05
ppa013681m PACid:17661666	9.116343961	2.49E-06	2.78E-05
ppa012101m PACid:17659111	9.116343961	2.49E-06	2.78E-05
ppa003848m PACid:17655130	9.116343961	2.49E-06	2.78E-05
ppa019010m PACid:17665726	9.033423002	5.10E-06	5.42E-05
ppa011478m PACid:17653594	9.033423002	5.10E-06	5.41E-05
ppa006872m PACid:17651641	9.033423002	5.10E-06	5.41E-05
ppa025978m PACid:17641290	8.945443836	1.04E-05	0.000106488
ppa022427m PACid:17644356	8.945443836	1.04E-05	0.000106398
ppa014756m PACid:17669137	8.945443836	1.04E-05	0.000106308
ppa014614m PACid:17656152	8.945443836	1.04E-05	0.000106219
ppa004215m PACid:17648712	8.945443836	1.04E-05	0.000106129
ppa024779m PACid:17663048	8.945443836	1.04E-05	0.00010604
ppa0211128m PACid:17656482	8.945443836	1.04E-05	0.000105951
ppa003347m PACid:17652060	8.945443836	1.04E-05	0.000105862
ppa017444m PACid:17645393	8.945443836	1.04E-05	0.000105773
ppa013715m PACid:17640823	8.851749041	2.13E-05	0.000204333
ppa019145m PACid:17652879	8.851749041	2.13E-05	0.000204171
ppa018846m PACid:17656837	8.851749041	2.13E-05	0.000204009
ppa001744m PACid:17668761	8.851749041	2.13E-05	0.000203848
ppa023786m PACid:17668232	8.754887502	4.36E-05	0.00039536
ppa005184m PACid:17661748	8.754887502	4.36E-05	0.000395064
ppa009277m PACid:17657637	8.754887502	4.36E-05	0.000394768
ppa005073m PACid:17668031	8.754887502	4.36E-05	0.000394472
ppa010654m PACid:17664478	8.754887502	4.36E-05	0.000394177
ppa014799m PACid:17658988	8.754887502	4.36E-05	0.000393883
ppa005777m PACid:17644497	8.754887502	4.36E-05	0.000393588
ppa013286m PACid:17642761	8.754887502	4.36E-05	0.000393295
ppa000853m PACid:17659309	8.754887502	4.36E-05	0.000393001
ppa009535m PACid:17663221	8.754887502	4.36E-05	0.000392709
ppa003422m PACid:17667449	8.754887502	4.36E-05	0.000392416
ppa006913m PACid:17667951	8.647458426	8.92E-05	0.000749083
ppa026190m PACid:17655231	8.647458426	8.92E-05	0.000748563
ppa008970m PACid:17653599	8.647458426	8.92E-05	0.000748044
ppa004021m PACid:17644590	8.647458426	8.92E-05	0.000747525
ppa007343m PACid:17644328	8.647458426	8.92E-05	0.000747007
ppa020339m PACid:17667191	8.647458426	8.92E-05	0.000746489
ppa004413m PACid:17661503	7.508264803	1.67E-208	9.17E-206
ppa022764m PACid:17661764	6.958134874	8.11E-71	1.02E-68
ppb006257m PACid:17668501	6.411583044	2.24E-117	6.16E-115

ppa008482m PACid:17662536	6.192501795	1.76E-80	2.76E-78
ppa010081m PACid:17661637	5.707008097	1.15E-28	5.30E-27
ppa011448m PACid:17646081	5.292282633	3.87E-21	1.34E-19
ppa010953m PACid:17662037	5.284005612	3.20E-90	5.95E-88
ppa015631m PACid:17664295	5.272807682	1.52E-40	9.70E-39
ppa005598m PACid:17642571	5.171735159	1.04E-55	9.42E-54
ppa007036m PACid:17651282	5.085303656	3.78E-18	1.16E-16
ppa007458m PACid:17644502	5.063532191	7.50E-18	2.26E-16
ppa004132m PACid:17652721	5.063532191	7.50E-18	2.26E-16
ppa008310m PACid:17657706	5.059188087	1.30E-42	8.66E-41
ppa010163m PACid:17654179	5.036716898	4.83E-99	1.08E-96
ppa003578m PACid:17653567	5.029123421	1.11E-33	5.88E-32
ppa011385m PACid:17661231	4.926063985	1.87E-38	1.13E-36
ppa026306m PACid:17655756	4.831602468	6.16E-29	2.87E-27
ppa020922m PACid:17661603	4.763915661	2.72E-14	6.61E-13
ppa004722m PACid:17660068	4.734093742	2.68E-20	8.95E-19
ppa014596m PACid:17662779	4.734093742	2.68E-20	8.92E-19
ppa001718m PACid:17657879	4.712133076	0	0
ppa003286m PACid:17661399	4.677663845	1.24E-92	2.38E-90
ppa020423m PACid:17663376	4.540530044	1.91E-28	8.76E-27
ppa003487m PACid:17649448	4.508585531	3.78E-181	1.90E-178
ppa026396m PACid:17654737	4.456093333	2.34E-11	4.62E-10
ppa021733m PACid:17642045	4.440680444	3.37E-16	9.14E-15
ppb021546m PACid:17650603	4.421137699	4.58E-11	8.82E-10
ppa003507m PACid:17663874	4.310882311	3.41E-10	6.13E-09
ppa026775m PACid:17660787	4.254965882	1.03E-99	2.34E-97
ppa005158m PACid:17665900	4.24309328	3.37E-69	4.11E-67
ppa007271m PACid:17642246	4.2410081	7.01E-14	1.66E-12
ppa017430m PACid:17643481	4.189421177	1.72E-21	6.13E-20
ppa005715m PACid:17641909	4.178503091	2.00E-25	8.21E-24
ppa020764m PACid:17653414	4.140071524	2.02E-32	1.02E-30
ppa006610m PACid:17661856	4.124296707	6.42E-97	1.31E-94
ppa007765m PACid:17660217	4.086307761	8.99E-20	2.94E-18
ppa006606m PACid:17665894	3.960492862	1.01E-67	1.17E-65
ppa020321m PACid:17655609	3.937535913	7.26E-21	2.47E-19
ppa019974m PACid:17646594	3.936856017	4.52E-37	2.67E-35
ppa012595m PACid:17667617	3.929576646	2.26E-30	1.10E-28
ppa009806m PACid:17647648	3.929552404	4.40E-69	5.32E-67
ppa015286m PACid:17666944	3.921487972	1.31E-07	1.78E-06
ppa005640m PACid:17652286	3.817796669	4.83E-07	6.11E-06
ppb013860m PACid:17665083	3.790431619	1.58E-15	4.16E-14
ppa005141m PACid:17666232	3.763015383	9.23E-07	1.12E-05
ppa017188m PACid:17661861	3.763015383	9.23E-07	1.12E-05
ppa004380m PACid:17641292	3.731115165	1.80E-36	1.02E-34

ppa007566m PACid:17644782	3.729049927	1.33E-25	5.57E-24
ppa018615m PACid:17644562	3.72591981	1.71E-17	4.96E-16
ppa009630m PACid:17646182	3.707944001	1.76E-06	2.04E-05
ppa004219m PACid:17642166	3.707008097	1.57E-22	5.80E-21
ppb011173m PACid:17660206	3.69538649	4.76E-09	7.62E-08
ppa002490m PACid:17667233	3.690353839	9.09E-25	3.64E-23
ppa001896m PACid:17667538	3.663015836	0	0
ppa012395m PACid:17649289	3.634807633	6.14E-46	4.42E-44
ppa000296m PACid:17654244	3.616047531	1.71E-08	2.59E-07
ppa006442m PACid:17664765	3.586998768	6.38E-06	6.69E-05
ppa003797m PACid:17667031	3.586998768	6.38E-06	6.68E-05
ppa002608m PACid:17643239	3.576446982	1.55E-29	7.35E-28
ppa005142m PACid:17662404	3.573991383	3.24E-08	4.78E-07
ppa027154m PACid:17667144	3.568715269	1.59E-66	1.79E-64
ppa003134m PACid:17659748	3.547295445	2.26E-176	1.09E-173
ppa001113m PACid:17664470	3.527003211	3.69E-95	7.43E-93
ppa006923m PACid:17650909	3.524723079	6.25E-26	2.64E-24
ppa002136m PACid:17668058	3.522498414	1.21E-05	0.000121455
ppa001356m PACid:17664449	3.522498414	1.21E-05	0.000121354
ppa012742m PACid:17648498	3.511419695	0	0
ppa001287m PACid:17668109	3.507816151	5.24E-111	1.38E-108
ppa018445m PACid:17649288	3.506625008	7.52E-52	6.27E-50
ppa012380m PACid:17645332	3.489133595	6.14E-10	1.07E-08
ppa012123m PACid:17664106	3.474519923	6.31E-12	1.29E-10
ppa006304m PACid:17654545	3.454978853	2.28E-05	0.000216033
ppa006153m PACid:17656361	3.454978853	2.28E-05	0.000215864
ppa010683m PACid:17648689	3.454978853	2.28E-05	0.000215695
ppa013577m PACid:17641362	3.454978853	2.28E-05	0.000215527
ppa001085m PACid:17647032	3.4381575	7.48E-18	2.26E-16
ppa014211m PACid:17664550	3.413814358	1.22E-41	7.86E-40
ppa014104m PACid:17669275	3.385314035	4.87E-17	1.39E-15
ppa023646m PACid:17651232	3.385314035	4.05E-09	6.56E-08
ppa009128m PACid:17642179	3.385080002	5.66E-21	1.94E-19
ppa009405m PACid:17649673	3.361023152	2.13E-22	7.83E-21
ppa027059m PACid:17661470	3.348578131	1.69E-16	4.68E-15
ppa016304m PACid:17640504	3.344699403	7.60E-07	9.37E-06
ppa014605m PACid:17659609	3.325425539	2.95E-14	7.16E-13
ppa008758m PACid:17651869	3.312113805	8.05E-05	0.000685552
ppa025728m PACid:17642577	3.311292926	3.14E-34	1.68E-32
ppa023006m PACid:17645227	3.293785131	1.42E-06	1.66E-05
ppa010099m PACid:17652474	3.293785131	1.42E-06	1.66E-05
ppa016354m PACid:17667664	3.269969472	4.97E-10	8.76E-09
ppa006836m PACid:17649297	3.259674714	1.88E-13	4.35E-12
ppa001841m PACid:17647655	3.249801144	2.98E-20	9.88E-19

ppa017252m PACid:17656265	3.2410081	2.64E-06	2.93E-05
ppa018950m PACid:17664119	3.238079727	9.22E-10	1.59E-08
ppa017146m PACid:17643976	3.223265459	3.49E-28	1.58E-26
ppa010328m PACid:17668507	3.220453938	2.79E-139	9.62E-137
ppa013722m PACid:17647538	3.218108535	2.52E-16	6.93E-15
ppa009987m PACid:17655949	3.189479225	8.01E-108	2.02E-105
ppa002544m PACid:17663600	3.186226814	4.89E-06	5.22E-05
ppa022356m PACid:17665362	3.186226814	4.89E-06	5.22E-05
ppa009698m PACid:17658186	3.186226814	4.89E-06	5.21E-05
ppa003377m PACid:17667530	3.177113062	3.50E-65	3.75E-63
ppa003805m PACid:17649186	3.171961269	4.31E-14	1.03E-12
ppa006994m PACid:17646766	3.150779952	5.78E-17	1.64E-15
ppa016888m PACid:17653515	3.098490275	0	0
ppa026947m PACid:17668942	3.065845403	3.24E-14	7.86E-13
ppa006746m PACid:17666547	3.062800787	5.62E-07	7.07E-06
ppa002298m PACid:17669014	3.062800787	6.89E-10	1.20E-08
ppa009745m PACid:17649428	3.040641984	3.09E-54	2.63E-52
ppa005472m PACid:17646666	3.031548836	3.57E-08	5.20E-07
ppa002187m PACid:17650626	3.014395643	4.28E-42	2.81E-40
ppa008048m PACid:17665082	3.010210199	3.05E-05	0.000283244
ppa004291m PACid:17641189	3.002036267	2.29E-09	3.83E-08
ppa002353m PACid:17665436	3.001697089	1.56E-25	6.49E-24
ppa010986m PACid:17643075	2.985814094	1.04E-69	1.28E-67
ppa021895m PACid:17641301	2.970666506	1.88E-06	2.15E-05
ppa017028m PACid:17646612	2.966907362	4.15E-31	2.05E-29
ppa012612m PACid:17658654	2.957732486	1.09E-48	8.37E-47
ppa018749m PACid:17663428	2.953933357	1.05E-16	2.93E-15
ppa014216m PACid:17660129	2.949921579	1.29E-78	1.97E-76
ppa009844m PACid:17651763	2.945709844	5.58E-05	0.000491113
ppa009022m PACid:17664534	2.945709844	5.58E-05	0.000490755
ppa004941m PACid:17664661	2.935459748	3.71E-25	1.50E-23
ppa004306m PACid:17659262	2.908743293	8.74E-55	7.66E-53
ppa009003m PACid:17661918	2.904171094	1.37E-08	2.09E-07
ppa005031m PACid:17643115	2.878190283	0.000101478	0.000838392
ppa010195m PACid:17665741	2.859626629	5.38E-145	2.03E-142
ppa024083m PACid:17642369	2.853194999	3.60E-15	9.25E-14
ppa012487m PACid:17646529	2.852606855	1.78E-90	3.37E-88
ppa008322m PACid:17647011	2.850033174	8.14E-13	1.78E-11
ppa011593m PACid:17652071	2.840338325	4.31E-16	1.16E-14
ppa012765m PACid:17659944	2.837423244	4.04E-118	1.19E-115
ppa021994m PACid:17665751	2.833750657	6.99E-07	8.65E-06
ppa005402m PACid:17657424	2.823940881	7.72E-16	2.06E-14
ppa020717m PACid:17649019	2.81724259	1.32E-35	7.21E-34
ppa009905m PACid:17663475	2.807658871	1.57E-26	6.76E-25

ppa021967m PACid:17661398	2.800351534	8.00E-08	1.12E-06
ppa000692m PACid:17647767	2.791549219	6.03E-10	1.05E-08
ppa006386m PACid:17649503	2.790431619	1.26E-06	1.48E-05
ppa009739m PACid:17668202	2.788966058	2.81E-29	1.33E-27
ppa010731m PACid:17661078	2.788089063	5.35E-42	3.50E-40
ppa018224m PACid:17662746	2.763015383	2.01E-05	0.000193583
ppa006665m PACid:17660601	2.763015383	2.01E-05	0.000193429
ppa022841m PACid:17665865	2.763015383	2.01E-05	0.000193275
ppa007958m PACid:17658602	2.753652001	4.11E-24	1.60E-22
ppa009106m PACid:17665424	2.745771492	2.25E-06	2.55E-05
ppa007697m PACid:17654070	2.7112883	1.46E-93	2.90E-91
ppa004336m PACid:17662282	2.707944001	3.60E-05	0.000329879
ppa009934m PACid:17663557	2.707195326	4.93E-21	1.70E-19
ppa010287m PACid:17662659	2.706192368	3.03E-217	1.83E-214
ppa027017m PACid:17649955	2.699684578	4.02E-06	4.37E-05
ppa001756m PACid:17657485	2.691292325	4.06E-205	2.14E-202
ppa018400m PACid:17657800	2.670967067	2.97E-122	9.44E-120
ppa012846m PACid:17643345	2.662350409	3.55E-83	5.87E-81
ppa003684m PACid:17649014	2.658130779	1.01E-23	3.87E-22
ppa010586m PACid:17658972	2.634463511	1.85E-47	1.36E-45
ppa011310m PACid:17652259	2.61819883	1.89E-08	2.85E-07
ppa002585m PACid:17661611	2.613293283	6.77E-50	5.38E-48
ppa002340m PACid:17655370	2.612835678	1.13E-36	6.53E-35
ppa021645m PACid:17656715	2.610750565	2.45E-24	9.60E-23
ppa019732m PACid:17644727	2.607873599	1.43E-06	1.67E-05
ppa002534m PACid:17664225	2.606325238	5.33E-11	1.02E-09
ppa006149m PACid:17661849	2.596710161	3.87E-09	6.32E-08
ppa016286m PACid:17651122	2.586998768	1.10E-11	2.23E-10
ppa012362m PACid:17643910	2.586998768	0.000113872	0.000933136
ppa004298m PACid:17665290	2.577577574	1.04E-27	4.62E-26
ppa005749m PACid:17650906	2.569357067	1.82E-27	7.99E-26
ppa004078m PACid:17641348	2.558092666	6.56E-33	3.33E-31
ppa001327m PACid:17656420	2.554508704	4.00E-12	8.28E-11
ppa011156m PACid:17662422	2.553544404	2.23E-05	0.000211542
ppa010034m PACid:17653895	2.538414681	0	0
ppa019653m PACid:17644724	2.537083096	5.14E-16	1.38E-14
ppa009284m PACid:17669366	2.53449337	6.97E-12	1.42E-10
ppa006905m PACid:17651659	2.522498414	4.41E-06	4.79E-05
ppa019257m PACid:17655452	2.522498414	2.25E-17	6.51E-16
ppa008715m PACid:17655161	2.507024833	8.83E-07	1.07E-05
ppa005137m PACid:17663194	2.498045283	9.01E-78	1.33E-75
ppa006352m PACid:17653826	2.494278568	2.11E-11	4.17E-10
ppa006679m PACid:17666700	2.490515704	3.22E-38	1.92E-36
ppa017516m PACid:17653116	2.487331934	1.16E-26	5.01E-25

ppa008147m PACid:17649944	2.476123555	3.93E-48	2.97E-46
ppa011725m PACid:17663445	2.474937734	4.22E-234	3.00E-231
ppa012433m PACid:17644508	2.455721935	3.08E-10	5.57E-09
ppa007157m PACid:17645576	2.448847839	3.55E-21	1.23E-19
ppa008636m PACid:17640963	2.445986088	6.83E-05	0.000591719
ppa002847m PACid:17662760	2.445986088	6.83E-05	0.000591295
ppa007671m PACid:17663378	2.445986088	6.83E-05	0.000590872
ppa005683m PACid:17644017	2.445986088	6.83E-05	0.000590449
ppa009872m PACid:17652907	2.445986088	6.83E-05	0.000590027
ppa006903m PACid:17658689	2.445783448	2.89E-15	7.48E-14
ppa001336m PACid:17652394	2.441987566	1.27E-08	1.95E-07
ppa000260m PACid:17660438	2.439048473	2.60E-09	4.28E-08
ppa011793m PACid:17666742	2.435887927	2.72E-50	2.20E-48
ppa004285m PACid:17668433	2.432355517	5.63E-23	2.11E-21
ppa001824m PACid:17642564	2.429843434	2.67E-06	2.96E-05
ppa003854m PACid:17641906	2.414792788	1.66E-36	9.42E-35
ppa002598m PACid:17667389	2.413366746	4.48E-09	7.22E-08
ppa008273m PACid:17668407	2.405728697	6.47E-21	2.21E-19
ppa008826m PACid:17665521	2.399591209	7.03E-60	6.90E-58
ppa001828m PACid:17665676	2.390914705	0.00011867	0.000967206
ppa002738m PACid:17648723	2.386746124	3.23E-10	5.83E-09
ppa023881m PACid:17644592	2.385704005	2.33E-05	0.000219751
ppa008472m PACid:17653732	2.375301446	1.55E-19	4.99E-18
ppb010066m PACid:17651729	2.369144481	1.14E-36	6.54E-35
ppa012242m PACid:17669132	2.36205896	1.00E-88	1.81E-86
ppa005008m PACid:17667126	2.346922474	7.95E-06	8.22E-05
ppa025709m PACid:17665691	2.344589903	5.44E-15	1.38E-13
ppa013451m PACid:17668078	2.336525471	6.06E-13	1.34E-11
ppa003682m PACid:17641618	2.309104055	1.16E-15	3.08E-14
ppa003047m PACid:17658308	2.304925186	9.21E-22	3.35E-20
ppa006294m PACid:17656965	2.303603437	1.36E-05	0.000135676
ppa022569m PACid:17643626	2.285611199	6.89E-05	0.000594696
ppa007273m PACid:17659637	2.271328927	4.67E-09	7.49E-08
ppa003830m PACid:17655317	2.262554388	2.43E-11	4.79E-10
ppa006759m PACid:17659157	2.259464008	2.28E-08	3.43E-07
ppa007054m PACid:17666367	2.257024531	5.22E-61	5.21E-59
ppa006313m PACid:17650503	2.243037938	2.98E-12	6.25E-11
ppa027060m PACid:17651214	2.232834168	0.000117598	0.000960407
ppa005437m PACid:17656870	2.224023507	9.56E-10	1.64E-08
ppa027069m PACid:17656884	2.220482831	1.88E-07	2.50E-06
ppa006263m PACid:17666726	2.218214785	1.36E-18	4.25E-17
ppa006989m PACid:17645364	2.213567092	3.88E-49	3.00E-47
ppa000657m PACid:17648606	2.212231919	1.64E-54	1.40E-52
ppa010319m PACid:17665276	2.210114092	4.63E-09	7.44E-08

ppa004909m PACid:17645285	2.206586718	6.49E-08	9.21E-07
ppa012860m PACid:17662261	2.205653671	0	0
ppa000725m PACid:17654584	2.1928361	1.34E-05	0.000133466
ppa011263m PACid:17655916	2.175642107	9.18E-31	4.49E-29
ppa022307m PACid:17665608	2.17457511	4.06E-16	1.10E-14
ppa003236m PACid:17645819	2.1672055	1.55E-06	1.81E-05
ppa006370m PACid:17660238	2.166809028	6.69E-05	0.000580929
ppa003011m PACid:17647193	2.166809028	6.69E-05	0.000580511
ppa010155m PACid:17658379	2.158272681	4.51E-09	7.26E-08
ppa005272m PACid:17644771	2.150779952	2.25E-05	0.000213892
ppa007427m PACid:17651235	2.150779952	2.25E-05	0.000213725
ppa011034m PACid:17649621	2.147743308	4.82E-12	9.90E-11
ppa008187m PACid:17648690	2.143676811	7.65E-06	7.93E-05
ppa010022m PACid:17660883	2.140835865	1.74E-33	9.08E-32
ppa003992m PACid:17668992	2.135424926	7.53E-09	1.17E-07
ppa007791m PACid:17662094	2.130453775	9.31E-20	3.04E-18
ppa006894m PACid:17659692	2.120376425	3.08E-62	3.15E-60
ppa008744m PACid:17648845	2.119239136	1.05E-07	1.45E-06
ppa010066m PACid:17641455	2.118413225	4.73E-17	1.35E-15
ppa009016m PACid:17657337	2.117630494	0.000112414	0.000921813
ppa022249m PACid:17664055	2.112209504	1.25E-08	1.93E-07
ppb022901m PACid:17669180	2.10363993	3.84E-48	2.92E-46
ppa000285m PACid:17641496	2.102882681	5.22E-10	9.17E-09
ppa001571m PACid:17649926	2.090667972	1.15E-13	2.67E-12
ppa002201m PACid:17651679	2.088781375	1.31E-68	1.55E-66
ppa005285m PACid:17644080	2.078961326	3.38E-68	3.93E-66
ppa1027190m PACid:17647925	2.071845125	1.96E-23	7.44E-22
ppa008338m PACid:17660922	2.06529146	2.46E-06	2.77E-05
ppa014506m PACid:17643053	2.062800787	8.43E-07	1.03E-05
ppa004373m PACid:17654058	2.055512428	2.22E-19	7.10E-18
ppa009871m PACid:17649917	2.0442739	8.35E-18	2.50E-16
ppa009849m PACid:17640310	2.038942242	5.53E-40	3.39E-38
ppa002471m PACid:17645482	2.03718492	4.78E-07	6.06E-06
ppa010379m PACid:17640308	2.033236329	1.39E-06	1.64E-05
ppa011230m PACid:17651381	2.031926641	4.08E-06	4.43E-05
ppa019687m PACid:17641026	2.028358555	3.43E-19	1.09E-17
ppa013299m PACid:17662997	2.0256306	3.53E-05	0.000324546
ppa006286m PACid:17658744	2.0256306	3.53E-05	0.000324299
ppa008324m PACid:17643702	2.021437171	1.11E-08	1.72E-07
ppa019639m PACid:17655055	2.016713874	0.000104629	0.000862068
ppa007723m PACid:17654186	2.010615327	1.27E-27	5.58E-26
ppa009067m PACid:17657150	2.005373172	6.44E-12	1.32E-10
ppa013064m PACid:17668965	1.99640388	3.29E-98	6.97E-96
ppa001765m PACid:17655910	1.992096606	1.49E-62	1.55E-60

ppa001527m PACid:17658170	1.987288948	2.57E-13	5.83E-12
ppa011044m PACid:17648393	1.985973808	2.03E-30	9.91E-29
ppa006512m PACid:17659307	1.975782604	1.27E-23	4.88E-22
ppa005294m PACid:17667209	1.975324967	3.22E-157	1.34E-154
ppa013708m PACid:17663915	1.970146522	3.76E-06	4.10E-05
ppa011352m PACid:17643136	1.967179492	1.40E-10	2.62E-09
ppa007860m PACid:17652672	1.965761247	5.88E-15	1.48E-13
ppa005902m PACid:17660817	1.96531419	2.50E-07	3.29E-06
ppa014503m PACid:17656023	1.964515019	1.64E-156	6.61E-154
ppa013368m PACid:17668706	1.957425581	1.15E-09	1.97E-08
ppa006672m PACid:17645548	1.940255414	9.54E-05	0.000793761
ppa011722m PACid:17665133	1.932814488	4.45E-20	1.47E-18
ppa007490m PACid:17658335	1.928387531	1.18E-06	1.40E-05
ppa010085m PACid:17668703	1.928107082	1.80E-05	0.0001751
ppa018617m PACid:17666468	1.923193705	1.09E-43	7.34E-42
ppa013103m PACid:17667358	1.921487972	2.28E-07	3.01E-06
ppa008016m PACid:17650754	1.917737038	1.23E-25	5.18E-24
ppa009136m PACid:17658618	1.912345949	3.22E-16	8.76E-15
ppa025857m PACid:17649431	1.911772817	5.28E-05	0.000466809
ppa003431m PACid:17653591	1.911772817	5.28E-05	0.000466468
ppa004326m PACid:17665938	1.904139985	2.49E-08	3.74E-07
ppa009496m PACid:17650143	1.903940649	9.54E-88	1.67E-85
ppa023908m PACid:17654425	1.899653175	1.91E-06	2.19E-05
ppa012289m PACid:17665635	1.898068486	9.60E-10	1.65E-08
ppa004942m PACid:17655293	1.897013567	2.43E-21	8.55E-20
ppa006010m PACid:17643881	1.896255427	3.69E-07	4.74E-06
ppa003015m PACid:17645696	1.89360719	7.16E-08	1.01E-06
ppa010093m PACid:17649202	1.893545094	3.06E-51	2.51E-49
ppa009854m PACid:17653845	1.883607288	7.64E-19	2.42E-17
ppa005120m PACid:17652935	1.870908005	8.56E-05	0.000721408
ppa007962m PACid:17645524	1.866004856	2.07E-28	9.46E-27
ppa005990m PACid:17657699	1.862815621	2.48E-09	4.10E-08
ppa010782m PACid:17665289	1.861394762	3.40E-15	8.76E-14
ppa000787m PACid:17650148	1.859758808	2.54E-20	8.52E-19
ppa023045m PACid:17659371	1.858656151	1.72E-06	1.98E-05
ppa011093m PACid:17651028	1.853675358	4.72E-05	0.000422492
ppa005609m PACid:17640450	1.853345826	2.40E-13	5.48E-12
ppa007071m PACid:17658137	1.847824346	1.07E-22	3.96E-21
ppa014606m PACid:17664257	1.841898353	2.02E-08	3.04E-07
ppa000340m PACid:17643231	1.835464228	5.32E-07	6.71E-06
ppa005392m PACid:17656199	1.823948896	2.96E-07	3.85E-06
ppa004917m PACid:17665205	1.82101276	2.16E-36	1.22E-34
ppa005030m PACid:17648649	1.817796669	1.53E-06	1.78E-05
ppa005016m PACid:17647958	1.810843908	7.95E-06	8.23E-05

ppa011212m PACid:17664062	1.810231683	8.49E-07	1.03E-05
ppa009417m PACid:17667850	1.809306662	3.91E-23	1.48E-21
ppa005324m PACid:17651642	1.807866244	1.75E-40	1.10E-38
ppa006660m PACid:17653187	1.80168355	5.13E-08	7.36E-07
ppa011847m PACid:17652536	1.801370747	1.40E-16	3.88E-15
ppa011780m PACid:17663806	1.801127452	6.21E-10	1.08E-08
ppa006158m PACid:17662577	1.798319083	8.96E-18	2.68E-16
ppa019519m PACid:17661868	1.797708272	5.46E-14	1.29E-12
ppa003259m PACid:17668991	1.791837015	2.31E-25	9.45E-24
ppa004860m PACid:17658520	1.791383173	4.27E-57	3.94E-55
ppa010884m PACid:17644160	1.776578222	4.10E-97	8.54E-95
ppa006253m PACid:17664541	1.776493958	0.000121466	0.000988658
ppa010480m PACid:17648423	1.776361777	7.50E-07	9.26E-06
ppa000586m PACid:17657979	1.763615631	6.66E-05	0.00057907
ppa019611m PACid:17665964	1.761756631	7.63E-15	1.91E-13
ppa006438m PACid:17656982	1.759627402	1.29E-07	1.75E-06
ppa013690m PACid:17655287	1.753776137	1.88E-162	8.13E-160
ppa007467m PACid:17651604	1.750860036	1.89E-13	4.36E-12
ppa008777m PACid:17656518	1.74900642	2.06E-51	1.71E-49
ppa008532m PACid:17659420	1.74723393	1.68E-12	3.57E-11
ppa010245m PACid:17652873	1.741360336	4.28E-10	7.57E-09
ppa003100m PACid:17646787	1.727679041	7.72E-20	2.53E-18
ppa011717m PACid:17658055	1.72378	8.19E-14	1.92E-12
ppa005160m PACid:17654206	1.723101418	1.15E-38	6.94E-37
ppa006982m PACid:17664116	1.722211154	2.14E-19	6.86E-18
ppa012991m PACid:17659024	1.721580052	0	0
ppa006424m PACid:17652757	1.718726476	6.04E-09	9.53E-08
ppa001275m PACid:17659742	1.715143492	3.18E-05	0.000294462
ppa011708m PACid:17651175	1.715143492	3.18E-05	0.000294237
ppa007548m PACid:17655717	1.715143492	3.18E-05	0.000294012
ppa002878m PACid:17659526	1.714241058	4.99E-59	4.83E-57
ppa002385m PACid:17641472	1.71293932	1.75E-05	0.00017091
ppa003782m PACid:17654827	1.707320132	5.47E-08	7.83E-07
ppa003910m PACid:17640619	1.706211056	6.95E-24	2.68E-22
ppa012166m PACid:17662798	1.70349809	5.18E-74	6.80E-72
ppa009500m PACid:17661103	1.702897338	1.70E-08	2.57E-07
ppa005789m PACid:17642531	1.699646811	1.63E-06	1.88E-05
ppa003457m PACid:17664615	1.686756502	9.13E-05	0.000762467
ppa007720m PACid:17666080	1.686756502	9.13E-05	0.00076194
ppa010015m PACid:17648027	1.683117193	2.19E-45	1.56E-43
ppa005470m PACid:17656374	1.681778673	5.00E-05	0.000446108
ppa005286m PACid:17654365	1.680213601	3.15E-65	3.40E-63
ppa012548m PACid:17658002	1.677689785	1.51E-05	0.000149185
ppa006895m PACid:17662466	1.672379642	7.80E-07	9.59E-06

ppa003610m PACid:17654292	1.671945802	1.41E-06	1.65E-05
ppa000468m PACid:17650750	1.669851398	4.32E-07	5.51E-06
ppa012449m PACid:17668812	1.668753325	1.33E-63	1.40E-61
ppa001976m PACid:17650566	1.668053149	4.13E-14	9.95E-13
ppa011723m PACid:17643268	1.658211483	2.01E-14	4.94E-13
ppa008791m PACid:17643209	1.655965872	1.84E-121	5.72E-119
ppa012574m PACid:17652999	1.652207063	5.36E-74	6.97E-72
ppa004229m PACid:17654065	1.649312912	1.10E-08	1.71E-07
ppa003664m PACid:17654382	1.648998981	1.71E-18	5.31E-17
ppa017571m PACid:17668125	1.648738411	7.83E-05	0.000669616
ppa002923m PACid:17649241	1.647958365	2.19E-06	2.49E-05
ppa000820m PACid:17663080	1.636616141	6.68E-30	3.22E-28
ppa007035m PACid:17656271	1.63085287	1.47E-284	1.11E-281
ppa001412m PACid:17642131	1.630194265	1.31E-88	2.34E-86
ppa018286m PACid:17645875	1.621624217	1.11E-05	0.000112891
ppa009834m PACid:17641050	1.621119118	3.55E-14	8.59E-13
ppa007235m PACid:17657810	1.618682291	5.36E-17	1.53E-15
ppa008438m PACid:17642352	1.613782777	0.000121983	0.000992198
ppa008886m PACid:17667313	1.613782777	0.000121983	0.000991531
ppa012923m PACid:17649658	1.610983284	1.34E-49	1.05E-47
ppa003788m PACid:17641669	1.609740481	4.63E-16	1.24E-14
ppa008642m PACid:17646866	1.606399671	2.18E-09	3.63E-08
ppa016730m PACid:17659022	1.604100573	1.61E-06	1.86E-05
ppa007227m PACid:17662542	1.601701717	1.25E-08	1.92E-07
ppa017186m PACid:17658778	1.589403844	5.98E-09	9.44E-08
ppa023043m PACid:17651473	1.586998768	5.68E-05	0.000498572
ppa017605m PACid:17652765	1.586998768	5.68E-05	0.000498211
ppa010530m PACid:17665723	1.585264541	1.09E-13	2.55E-12
ppa000080m PACid:17667623	1.57873391	4.47E-06	4.82E-05
ppa001833m PACid:17641170	1.578291067	1.97E-12	4.17E-11
ppa000099m PACid:17650267	1.577959113	1.11E-07	1.53E-06
ppa005700m PACid:17655040	1.577432199	1.85E-18	5.71E-17
ppa008525m PACid:17651173	1.574321615	7.94E-169	3.56E-166
ppa010274m PACid:17666750	1.562227188	7.78E-09	1.21E-07
ppa002202m PACid:17667115	1.557887259	1.32E-56	1.20E-54
ppa012613m PACid:17661392	1.555109023	8.75E-05	0.000736128
ppa013340m PACid:17642934	1.551499742	9.16E-55	7.97E-53
ppa007880m PACid:17651364	1.550956329	1.34E-15	3.52E-14
ppa004821m PACid:17650013	1.548645605	1.24E-05	0.00012419
ppa004490m PACid:17661677	1.547630875	5.84E-13	1.30E-11
ppa010221m PACid:17643128	1.544320516	1.78E-06	2.05E-05
ppa010944m PACid:17641470	1.538442206	5.62E-09	8.94E-08
ppa025683m PACid:17652395	1.537985492	1.38E-116	3.72E-114
ppa011893m PACid:17645079	1.533553833	1.54E-78	2.33E-76

ppa006034m PACid:17661265	1.532611185	8.37E-07	1.02E-05
ppa010078m PACid:17641248	1.531266904	1.22E-07	1.67E-06
ppa000771m PACid:17645318	1.530291855	3.38E-17	9.74E-16
ppa1027211m PACid:17661916	1.523857524	8.51E-09	1.32E-07
ppa004833m PACid:17658938	1.519554409	5.46E-22	1.99E-20
ppa016609m PACid:17646065	1.517275693	3.42E-05	0.00031525
ppa011193m PACid:17646869	1.511058153	3.61E-90	6.61E-88
ppa004637m PACid:17646982	1.50864528	3.11E-17	8.98E-16
ppa004568m PACid:17663074	1.504149986	9.68E-30	4.62E-28
ppa001810m PACid:17648315	1.50060386	1.26E-17	3.69E-16
ppa003899m PACid:17659080	1.500140058	4.34E-48	3.26E-46
ppa000255m PACid:17654036	1.496446461	2.80E-07	3.66E-06
ppa000656m PACid:17660986	1.490170118	7.43E-14	1.75E-12
ppa002350m PACid:17656726	1.487987687	4.91E-13	1.10E-11
ppa004703m PACid:17666113	1.487445995	2.49E-38	1.49E-36
ppa006299m PACid:17665488	1.483632953	6.97E-31	3.43E-29
ppa006328m PACid:17662823	1.482769155	2.51E-21	8.80E-20
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ppa003796m PACid:17665462	1.47942115	2.41E-05	0.000227
ppa012591m PACid:17641346	1.478796551	2.08E-143	7.60E-141
ppa007177m PACid:17667690	1.478423439	4.22E-07	5.39E-06
ppa004544m PACid:17643196	1.474594563	3.40E-78	5.07E-76
ppa002453m PACid:17647608	1.472151182	8.66E-12	1.76E-10
ppa002985m PACid:17654476	1.469283888	1.54E-11	3.08E-10
ppa002142m PACid:17668526	1.46518036	1.12E-44	7.65E-43
ppa006651m PACid:17655734	1.465122731	1.15E-08	1.78E-07
ppa004571m PACid:17653993	1.462930005	2.94E-16	8.04E-15
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ppa013301m PACid:17663848	1.445180133	4.81E-10	8.48E-09
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ppa021958m PACid:17653020	1.438520224	5.09E-11	9.74E-10
ppa001535m PACid:17645027	1.429486412	7.81E-30	3.75E-28
ppa009692m PACid:17654407	1.428118144	7.55E-11	1.43E-09
ppa009353m PACid:17644381	1.414425799	4.64E-15	1.18E-13
ppa1027122m PACid:17662689	1.411616537	6.16E-26	2.61E-24
ppa010827m PACid:17667612	1.411142081	4.52E-05	0.000405741
ppa007118m PACid:17651724	1.409612748	1.22E-17	3.58E-16
ppa002674m PACid:17657248	1.407681125	2.23E-12	4.69E-11
ppa008787m PACid:17651814	1.400396669	8.13E-05	0.000692006
ppa007127m PACid:17665180	1.397806676	1.10E-09	1.87E-08
ppa007519m PACid:17646051	1.394504554	8.17E-07	1.00E-05
ppa001973m PACid:17652447	1.393914208	3.82E-07	4.91E-06
ppa009903m PACid:17655203	1.392023505	1.65E-55	1.48E-53

ppa012973m PACid:17659839	1.38590815	8.60E-77	1.18E-74
ppa009850m PACid:17662201	1.385838806	1.80E-11	3.57E-10
ppa006177m PACid:17667329	1.379264094	1.29E-08	1.97E-07
ppa000775m PACid:17642849	1.377199382	5.92E-12	1.22E-10
ppa005584m PACid:17662113	1.370666012	2.08E-13	4.78E-12
ppa002583m PACid:17662966	1.368936645	4.90E-28	2.19E-26
ppa008320m PACid:17653469	1.367063008	2.15E-06	2.44E-05
ppa014283m PACid:17669250	1.360864739	1.44E-10	2.69E-09
ppa002034m PACid:17647482	1.359684111	1.78E-06	2.05E-05
ppa007900m PACid:17655851	1.350826141	6.13E-28	2.73E-26
ppa001897m PACid:17650737	1.348075286	8.24E-05	0.00069908
ppa011637m PACid:17656391	1.344834517	1.21E-20	4.10E-19
ppa010515m PACid:17660684	1.344589903	1.04E-07	1.44E-06
ppa007547m PACid:17664654	1.34342503	1.46E-05	0.000143942
ppa020645m PACid:17657493	1.340244718	3.14E-05	0.000291014
ppa001849m PACid:17661386	1.336525471	6.79E-05	0.000588861
ppa006089m PACid:17664790	1.332634304	2.12E-10	3.91E-09
ppa007068m PACid:17660515	1.331322085	2.59E-05	0.000243489
ppa006888m PACid:17658940	1.328951941	1.11E-21	4.02E-20
ppa011762m PACid:17654448	1.326446537	1.55E-87	2.68E-85
ppa004473m PACid:17668713	1.326090675	4.20E-17	1.21E-15
ppa002769m PACid:17668075	1.324899661	1.32E-66	1.51E-64
ppa002424m PACid:17646139	1.318318992	1.38E-09	2.34E-08
ppa010824m PACid:17667635	1.317404748	5.72E-07	7.17E-06
ppa016117m PACid:17665168	1.317313313	3.16E-06	3.47E-05
ppa006101m PACid:17658859	1.314000418	1.73E-26	7.46E-25
ppa000393m PACid:17659059	1.311292926	9.97E-05	0.000827503
ppa008288m PACid:17661968	1.311292926	9.97E-05	0.000826935
ppa013712m PACid:17662863	1.310046472	1.83E-07	2.44E-06
ppa007181m PACid:17667360	1.308469055	1.01E-06	1.21E-05
ppa013099m PACid:17662664	1.305863378	1.45E-05	0.000143677
ppa007610m PACid:17653774	1.305863378	1.45E-05	0.00014356
ppa004751m PACid:17664865	1.30533713	5.83E-21	2.00E-19
ppa003695m PACid:17663413	1.300586463	1.54E-11	3.08E-10
ppa011474m PACid:17661144	1.294374965	1.57E-08	2.38E-07
ppa003252m PACid:17666502	1.291982694	3.79E-06	4.13E-05
ppa006064m PACid:17650663	1.289877271	8.86E-26	3.73E-24
ppa012979m PACid:17645788	1.28636691	1.21E-06	1.44E-05
ppa002401m PACid:17652702	1.285945505	2.11E-05	0.000203004
ppa009110m PACid:17643985	1.282044699	5.82E-08	8.29E-07
ppa010752m PACid:17667911	1.277533976	1.23E-07	1.68E-06
ppa006421m PACid:17647678	1.274752851	5.50E-06	5.82E-05
ppa006520m PACid:17653922	1.269591608	4.52E-06	4.86E-05
ppa006726m PACid:17649419	1.269446742	9.80E-05	0.000814077

ppa005787m PACid:17656114	1.249516482	5.12E-36	2.84E-34
ppa001815m PACid:17652194	1.243889357	4.43E-05	0.000398306
ppa010551m PACid:17644046	1.243348611	1.73E-07	2.31E-06
ppa004526m PACid:17664321	1.240593948	1.43E-07	1.93E-06
ppa018884m PACid:17667611	1.237723317	3.62E-06	3.95E-05
ppa001577m PACid:17647242	1.233050903	2.98E-05	0.000276696
ppa004528m PACid:17642861	1.230043288	2.44E-06	2.75E-05
ppa016100m PACid:17664699	1.228166096	7.78E-05	0.000665849
ppa001957m PACid:17665341	1.225555214	1.27E-35	6.99E-34
ppa011368m PACid:17665965	1.219807218	2.46E-12	5.18E-11
ppa005627m PACid:17658765	1.218553963	5.22E-05	0.000461817
ppa007450m PACid:17644102	1.21115612	3.81E-39	2.31E-37
ppa007970m PACid:17655333	1.210505355	7.73E-13	1.70E-11
ppa020825m PACid:17652478	1.208896233	9.02E-06	9.28E-05
ppa018908m PACid:17667971	1.206394631	0.00011168	0.00091641
ppa008730m PACid:17657884	1.204630679	2.13E-10	3.91E-09
ppa001094m PACid:17663374	1.20179346	6.06E-06	6.38E-05
ppa010868m PACid:17642911	1.198153543	4.97E-06	5.29E-05
ppa007013m PACid:17665763	1.19733932	1.08E-65	1.18E-63
ppa000893m PACid:17648620	1.195829334	1.06E-06	1.28E-05
ppa008159m PACid:17658015	1.193924706	2.12E-49	1.65E-47
ppa007930m PACid:17647761	1.189397957	4.99E-05	0.000444916
ppa018805m PACid:17660504	1.185747039	2.22E-13	5.10E-12
ppa011844m PACid:17652196	1.185745519	8.62E-06	8.89E-05
ppa012535m PACid:17653141	1.175378368	5.72E-45	3.95E-43
ppa008537m PACid:17656421	1.175317495	1.14E-35	6.31E-34
ppa006450m PACid:17668721	1.173131704	3.96E-15	1.01E-13
ppa000157m PACid:17655669	1.170761104	1.49E-05	0.000147335
ppa011865m PACid:17664690	1.167763012	1.86E-33	9.67E-32
ppa007605m PACid:17654073	1.167638569	1.98E-21	7.00E-20
ppa003639m PACid:17643967	1.16616748	2.80E-40	1.75E-38
ppa012596m PACid:17665075	1.164975106	3.08E-07	3.99E-06
ppa008769m PACid:17660321	1.164488155	1.19E-227	7.55E-225
ppa004936m PACid:17653005	1.163722272	3.88E-46	2.81E-44
ppa003097m PACid:17644399	1.161854874	1.17E-06	1.40E-05
ppa010812m PACid:17646625	1.152363593	3.02E-11	5.92E-10
ppa012919m PACid:17668169	1.152240594	4.51E-12	9.30E-11
ppa003820m PACid:17662926	1.151799165	2.46E-06	2.77E-05
ppa009090m PACid:17646603	1.149183155	0.000100401	0.000832338
ppa002376m PACid:17644619	1.149183155	0.000100401	0.000831768
ppa009289m PACid:17654883	1.148089731	2.86E-08	4.25E-07
ppa005358m PACid:17644469	1.145544153	7.76E-13	1.70E-11
ppa007655m PACid:17650870	1.145446025	9.44E-06	9.68E-05
ppa010633m PACid:17668143	1.14231642	5.46E-05	0.000481655

ppa013271m PACid:17654126	1.141368557	5.70E-17	1.62E-15
ppa011969m PACid:17668402	1.138973782	7.87E-77	1.09E-74
ppa003294m PACid:17653373	1.136586071	3.98E-11	7.72E-10
ppa004404m PACid:17645715	1.13290278	1.20E-19	3.88E-18
ppa001286m PACid:17652397	1.12673023	0.00011544	0.000943422
ppa010399m PACid:17651736	1.124098927	5.93E-06	6.25E-05
ppa009610m PACid:17664431	1.123064809	4.85E-06	5.18E-05
ppa008618m PACid:17667519	1.122676521	2.48E-14	6.05E-13
ppa007076m PACid:17641383	1.116229807	1.59E-10	2.96E-09
ppa010928m PACid:17656430	1.109218227	8.28E-06	8.55E-05
ppa003574m PACid:17649082	1.100860042	2.51E-10	4.59E-09
ppa000383m PACid:17648534	1.100536233	1.07E-17	3.17E-16
ppa004955m PACid:17653696	1.097870513	2.28E-28	1.04E-26
ppa002531m PACid:17666143	1.097595698	6.92E-21	2.36E-19
ppa003657m PACid:17655447	1.096418578	1.84E-07	2.45E-06
ppa008417m PACid:17654884	1.088884819	2.84E-09	4.66E-08
ppa010500m PACid:17657393	1.087526792	1.57E-09	2.65E-08
ppa006262m PACid:17656841	1.084417822	4.99E-14	1.19E-12
ppa004363m PACid:17642533	1.084072034	1.92E-64	2.03E-62
ppa000665m PACid:17650265	1.082287911	8.14E-05	0.000692026
ppa010473m PACid:17651461	1.076830685	0	0
ppa004524m PACid:17645797	1.065184506	6.29E-51	5.14E-49
ppa016011m PACid:17644681	1.064130337	1.21E-05	0.000121399
ppa000637m PACid:17650039	1.064130337	8.07E-08	1.13E-06
ppa002334m PACid:17662100	1.061185501	4.25E-23	1.60E-21
ppa009971m PACid:17654547	1.055521947	1.25E-08	1.92E-07
ppa013113m PACid:17661996	1.053328052	4.48E-07	5.70E-06
ppb023395m PACid:17663996	1.049113501	2.50E-05	0.000235515
ppa003730m PACid:17647793	1.046422396	2.54E-08	3.80E-07
ppa013232m PACid:17664682	1.04535675	1.02E-07	1.42E-06
ppa011227m PACid:17656249	1.045280879	5.09E-11	9.73E-10
ppa008719m PACid:17652237	1.044738315	1.36E-10	2.55E-09
ppa004451m PACid:17656143	1.043954675	3.00E-10	5.44E-09
ppa007520m PACid:17645059	1.042821627	7.51E-07	9.26E-06
ppa001692m PACid:17655278	1.037937593	3.47E-08	5.08E-07
ppa001186m PACid:17657648	1.036870779	4.06E-12	8.40E-11
ppa007844m PACid:17649204	1.033757632	3.44E-05	0.000316486
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ppa007591m PACid:17651555	1.030648305	1.22E-13	2.83E-12
ppa014856m PACid:17658962	1.02888059	1.61E-40	1.02E-38
ppa021469m PACid:17645617	1.02816353	3.95E-11	7.67E-10
ppa005350m PACid:17648711	1.025526056	7.29E-09	1.14E-07
ppa005277m PACid:17650866	1.021860139	1.19E-21	4.29E-20
ppa002527m PACid:17647771	1.021072044	1.15E-06	1.37E-05

ppa006873m PACid:17641291	1.017929458	1.43E-07	1.93E-06
ppa010918m PACid:17660241	1.016397444	7.07E-05	0.000609831
ppa004924m PACid:17651293	1.010637431	9.44E-10	1.62E-08
ppa008102m PACid:17650351	1.007900105	2.53E-09	4.18E-08
ppa006860m PACid:17658416	1.007508467	2.97E-08	4.40E-07
ppa017449m PACid:17652377	1.004772957	6.57E-08	9.32E-07
ppa002140m PACid:17657831	1.00305548	6.44E-05	0.000562285
ppa004926m PACid:17648238	1.002715918	8.54E-15	2.13E-13
ppa005434m PACid:17642225	1.002376484	9.57E-07	1.16E-05
ppa004555m PACid:17659130	1.000680998	4.17E-33	2.13E-31
ppa012515m PACid:17641010	1.000526051	2.71E-08	4.03E-07
ppa009635m PACid:17650061	1.000421779	1.16E-05	0.000117187
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ppa010154m PACid:17662227	-11.43671154	4.06E-28	1.82E-26
ppa011095m PACid:17659760	-11.16741815	1.87E-23	7.11E-22
ppa024234m PACid:17653614	-11.09143539	2.74E-22	1.00E-20
ppa025143m PACid:17643435	-10.83605036	8.63E-19	2.72E-17
ppa005901m PACid:17648495	-10.76487159	6.47E-18	1.96E-16
ppa008626m PACid:17650701	-10.6635581	9.48E-17	2.66E-15
ppa027164m PACid:17643882	-10.37395266	7.79E-14	1.83E-12
ppa023758m PACid:17664707	-10.2737956	5.84E-13	1.30E-11
ppa002363m PACid:17661991	-10.01122726	6.41E-11	1.22E-09
ppa017806m PACid:17649435	-9.968666793	1.25E-10	2.35E-09
ppa020537m PACid:17643147	-9.882643049	4.80E-10	8.48E-09
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ppa021383m PACid:17655177	-9.583082768	2.69E-08	4.02E-07
ppa027063m PACid:17656719	-9.525520809	5.27E-08	7.55E-07
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ppa022459m PACid:17648375	-9.46760555	1.03E-07	1.43E-06
ppa023213m PACid:17664985	-9.342074668	3.95E-07	5.07E-06
ppa003161m PACid:17657850	-9.273795599	7.73E-07	9.51E-06
ppa013235m PACid:17656256	-9.204571144	1.51E-06	1.76E-05
ppa020980m PACid:17643110	-9.204571144	1.51E-06	1.76E-05
ppa018706m PACid:17655617	-9.129283017	2.96E-06	3.26E-05
ppa011770m PACid:17664672	-9.129283017	2.96E-06	3.26E-05
ppa019215m PACid:17657563	-9.129283017	2.96E-06	3.25E-05
ppa011822m PACid:17642112	-9.052568051	5.79E-06	6.11E-05
ppb012748m PACid:17656298	-8.968666793	1.13E-05	0.000114618
ppa022398m PACid:17664899	-8.968666793	1.13E-05	0.000114522
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ppa015371m PACid:17668071	-8.787902559	4.33E-05	0.000394222
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ppa019793m PACid:17654943	-8.689997971	8.48E-05	0.000718871
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ppa006231m PACid:17642062	-8.689997971	8.48E-05	0.000717865
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ppa014982m PACid:17659372	-8.689997971	8.48E-05	0.000716861
ppa022925m PACid:17649685	-8.689997971	8.48E-05	0.00071636
ppa022323m PACid:17648014	-8.689997971	8.48E-05	0.000715859
ppa001076m PACid:17658297	-8.689997971	8.48E-05	0.00071536
ppa012767m PACid:17665694	-5.267390811	2.13E-21	7.52E-20
ppa009513m PACid:17652409	-5.143068155	3.01E-74	4.05E-72
ppa019171m PACid:17640976	-5.089186697	4.54E-36	2.53E-34
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ppa005351m PACid:17667368	-4.943534078	2.07E-24	8.11E-23
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ppa000438m PACid:17649984	-4.833990049	1.83E-22	6.75E-21
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ppa026927m PACid:17661024	-4.20994824	8.96E-99	1.97E-96
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ppa016155m PACid:17642177	-3.89463894	8.43E-37	4.90E-35
ppa010418m PACid:17660154	-3.891191909	1.86E-33	9.69E-32
ppa015791m PACid:17652739	-3.881854045	1.34E-07	1.82E-06
ppa009312m PACid:17646620	-3.881579507	9.75E-11	1.83E-09
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ppa019623m PACid:17656091	-3.161333853	5.59E-29	2.61E-27
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ppa005226m PACid:17650776	-2.883254798	3.95E-44	2.68E-42
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ppa006159m PACid:17658937	-2.38389817	1.69E-10	3.14E-09
ppa005873m PACid:17653466	-2.374395515	3.72E-06	4.06E-05
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ppa005820m PACid:17650912	-2.356551491	1.12E-77	1.63E-75
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ppa024858m PACid:17661535	-1.97769322	4.74E-05	0.000424269
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ppa023716m PACid:17640322	-1.9557261	4.85E-31	2.39E-29
ppa012344m PACid:17665337	-1.946936649	4.15E-27	1.82E-25
ppa001969m PACid:17653225	-1.943191764	2.13E-21	7.53E-20
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ppa013260m PACid:17654661	-1.867991475	7.70E-21	2.61E-19

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ppa005513m PACid:17641943	-1.860773423	4.70E-45	3.28E-43
ppa011364m PACid:17662916	-1.858982287	1.01E-11	2.03E-10
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ppa021176m PACid:17650413	-1.848455706	2.58E-07	3.39E-06
ppa013450m PACid:17659501	-1.848455706	2.58E-07	3.39E-06
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ppa013426m PACid:17643234	-1.749978131	3.29E-10	5.92E-09
ppa025989m PACid:17655273	-1.741966275	1.57E-05	0.000154385
ppa010800m PACid:17644802	-1.733840461	1.37E-07	1.86E-06
ppa018866m PACid:17642245	-1.733840461	1.37E-07	1.85E-06
ppb010244m PACid:17667542	-1.73306114	7.42E-14	1.75E-12
ppa013305m PACid:17655745	-1.731448589	2.31E-06	2.61E-05
ppa006431m PACid:17660508	-1.724067367	1.91E-10	3.53E-09
ppa000104m PACid:17664785	-1.713879285	1.91E-09	3.21E-08
ppa007832m PACid:17645388	-1.710283552	2.91E-10	5.29E-09
ppa002045m PACid:17653156	-1.709877767	8.59E-07	1.05E-05
ppb023648m PACid:17651305	-1.702818728	6.06E-19	1.92E-17
ppa000687m PACid:17666037	-1.697776329	7.84E-08	1.10E-06
ppa004537m PACid:17646997	-1.693734694	3.20E-07	4.13E-06
ppa004042m PACid:17652434	-1.690205661	4.80E-08	6.91E-07
ppa001941m PACid:17666152	-1.68993206	2.46E-13	5.58E-12
ppa005617m PACid:17664214	-1.68968165	5.03E-37	2.95E-35
ppa008401m PACid:17665391	-1.676152843	3.99E-74	5.30E-72

ppa026720m PACid:17641519	-1.654771967	3.40E-12	7.09E-11
ppa011177m PACid:17647931	-1.650283549	1.24E-174	5.76E-172
ppa016719m PACid:17642109	-1.650253961	5.67E-05	0.000497273
ppa012415m PACid:17661286	-1.646747193	4.51E-07	5.73E-06
ppa005393m PACid:17645759	-1.646747193	4.51E-07	5.72E-06
ppa007393m PACid:17645810	-1.645104736	3.42E-05	0.000315126
ppb013010m PACid:17669289	-1.640801102	2.71E-15	7.00E-14
ppa005302m PACid:17641883	-1.640771116	2.34E-09	3.89E-08
ppa005542m PACid:17643009	-1.636301198	1.26E-11	2.54E-10
ppa011819m PACid:17646328	-1.630619892	3.71E-29	1.74E-27
ppa014016m PACid:17649797	-1.628489876	5.76E-09	9.13E-08
ppa000094m PACid:17663888	-1.626215133	6.82E-07	8.46E-06
ppa008528m PACid:17645732	-1.623436649	7.58E-06	7.88E-05
ppa000120m PACid:17646271	-1.623436649	7.58E-06	7.87E-05
ppa011167m PACid:17648743	-1.623269557	6.69E-23	2.49E-21
ppa013661m PACid:17647188	-1.618024521	4.71E-58	4.45E-56
ppa018565m PACid:17663039	-1.617701117	1.04E-21	3.76E-20
ppa011297m PACid:17668585	-1.614837296	5.19E-05	0.00046057
ppa004188m PACid:17642110	-1.614837296	5.19E-05	0.000460232
ppa011808m PACid:17642082	-1.611901573	5.30E-09	8.47E-08
ppa025434m PACid:17653233	-1.603201619	1.89E-05	0.000183082
ppa017535m PACid:17644582	-1.603201619	1.89E-05	0.000182936
ppa021082m PACid:17658469	-1.598760048	1.14E-05	0.000115539
ppa003719m PACid:17646583	-1.593952798	1.06E-16	2.94E-15
ppa018041m PACid:17648846	-1.593083461	2.20E-55	1.96E-53
ppb019987m PACid:17662744	-1.592038018	2.97E-09	4.86E-08
ppa006306m PACid:17660572	-1.589520783	3.90E-11	7.59E-10
ppa002999m PACid:17642517	-1.584962501	7.84E-05	0.000669248
ppa011176m PACid:17667021	-1.584962501	7.84E-05	0.000668775
ppa012001m PACid:17655514	-1.555302832	2.27E-35	1.24E-33
ppa012769m PACid:17668256	-1.555122281	1.17E-07	1.60E-06
ppa004540m PACid:17663706	-1.555122281	1.17E-07	1.60E-06
ppa012153m PACid:17651488	-1.547214143	2.58E-05	0.000242415
ppa002969m PACid:17660420	-1.541585438	2.10E-06	2.39E-05
ppa009639m PACid:17650220	-1.540594789	6.87E-217	3.95E-214
ppa023832m PACid:17652091	-1.533969709	1.24E-09	2.12E-08
ppa006244m PACid:17654150	-1.527573828	1.07E-17	3.18E-16
ppa011280m PACid:17658150	-1.524439129	8.01E-118	2.30E-115
ppa012480m PACid:17649977	-1.521652198	3.55E-08	5.19E-07
ppa013223m PACid:17661976	-1.520927233	1.74E-59	1.70E-57
ppa004542m PACid:17646649	-1.520761248	2.26E-18	6.95E-17
ppa017910m PACid:17657395	-1.515164761	1.11E-19	3.62E-18
ppb001660m PACid:17644700	-1.504208009	2.33E-07	3.07E-06
ppa005890m PACid:17653764	-1.498428453	1.26E-05	0.000126061

ppa013737m PACid:17652924	-1.495599044	4.00E-09	6.51E-08
ppa012231m PACid:17669102	-1.494666575	3.34E-57	3.10E-55
ppa025855m PACid:17651626	-1.492097808	9.50E-05	0.000791255
ppa003877m PACid:17667033	-1.490274416	1.27E-07	1.73E-06
ppa010072m PACid:17666074	-1.477753257	3.40E-50	2.72E-48
ppa007105m PACid:17648564	-1.475569019	1.14E-07	1.57E-06
ppa027208m PACid:17648540	-1.471433555	3.07E-07	3.99E-06
ppa000698m PACid:17661207	-1.46880125	5.11E-05	0.00045364
ppa015407m PACid:17662915	-1.466978428	1.37E-06	1.61E-05
ppa004027m PACid:17653607	-1.46579802	8.47E-05	0.000718487
ppa011393m PACid:17641491	-1.463383818	2.20E-229	1.47E-226
ppa008063m PACid:17660580	-1.454393323	1.66E-05	0.0001629
ppa012954m PACid:17669077	-1.452564681	2.73E-43	1.83E-41
ppb023427m PACid:17642344	-1.448498607	1.71E-15	4.48E-14
ppa000114m PACid:17657476	-1.441867766	7.53E-05	0.000647083
ppa022581m PACid:17657666	-1.441223608	1.55E-17	4.53E-16
ppa013500m PACid:17651996	-1.438005061	8.95E-06	9.22E-05
ppa003417m PACid:17647472	-1.435999862	6.16E-09	9.71E-08
ppa011792m PACid:17668531	-1.434430034	3.65E-17	1.05E-15
ppa011284m PACid:17667864	-1.431991246	6.16E-82	9.80E-80
ppa009332m PACid:17665631	-1.427794632	6.88E-77	9.79E-75
ppa013939m PACid:17653268	-1.426324136	3.05E-21	1.06E-19
ppa019192m PACid:17657896	-1.420640206	7.95E-06	8.23E-05
ppa008201m PACid:17653320	-1.41223689	2.16E-05	0.000206352
ppa026106m PACid:17644929	-1.41223689	2.16E-05	0.000206189
ppa007604m PACid:17655140	-1.412184096	3.71E-15	9.51E-14
ppa005590m PACid:17651297	-1.411583282	2.73E-45	1.93E-43
ppa010223m PACid:17641541	-1.407160687	1.23E-82	2.01E-80
ppa013469m PACid:17668624	-1.405329946	1.82E-10	3.37E-09
ppa010167m PACid:17663484	-1.381846974	6.06E-13	1.34E-11
ppa007255m PACid:17644606	-1.371934461	7.76E-42	5.04E-40
ppa002536m PACid:17661766	-1.366408538	4.57E-05	0.000409455
ppa003262m PACid:17650664	-1.351448938	1.30E-05	0.000129866
ppa026813m PACid:17659943	-1.351028458	2.04E-10	3.77E-09
ppa013050m PACid:17663148	-1.347239183	2.70E-08	4.02E-07
ppa003802m PACid:17664861	-1.340167213	2.63E-09	4.32E-08
ppa008491m PACid:17668236	-1.33909216	2.38E-08	3.57E-07
ppa011898m PACid:17666678	-1.337210012	2.31E-25	9.42E-24
ppa012754m PACid:17640801	-1.334692189	2.17E-50	1.76E-48
ppa024854m PACid:17643685	-1.326704891	3.40E-08	5.00E-07
ppa023263m PACid:17650445	-1.326704891	3.40E-08	4.99E-07
ppa014463m PACid:17643699	-1.320367581	9.41E-07	1.14E-05
ppa010755m PACid:17647934	-1.312400254	7.26E-32	3.62E-30
ppa012790m PACid:17662237	-1.310454224	5.01E-14	1.19E-12

ppa007608m PACid:17660560	-1.306352289	1.43E-05	0.000141893
ppa013445m PACid:17651358	-1.306338911	2.23E-66	2.50E-64
ppb015588m PACid:17669011	-1.29712046	1.08E-08	1.68E-07
ppa009369m PACid:17653310	-1.295715875	1.64E-18	5.10E-17
ppa001230m PACid:17642722	-1.295167027	1.25E-05	0.000125201
ppa009169m PACid:17646352	-1.294815146	6.04E-08	8.59E-07
ppa001169m PACid:17646296	-1.290677161	2.11E-22	7.77E-21
ppa012984m PACid:17660219	-1.288438766	4.38E-82	7.06E-80
ppa020389m PACid:17662447	-1.286152068	5.51E-07	6.93E-06
ppa011733m PACid:17642487	-1.284997876	1.09E-14	2.69E-13
ppa014312m PACid:17668747	-1.284387361	5.93E-15	1.49E-13
ppa003828m PACid:17648549	-1.284274189	5.82E-06	6.15E-05
ppa006898m PACid:17667208	-1.281598011	0.000118605	0.000967979
ppa005333m PACid:17654348	-1.276617378	1.78E-05	0.000173687
ppa006523m PACid:17651815	-1.276038131	1.05E-18	3.29E-17
ppa012018m PACid:17651778	-1.274916029	5.08E-06	5.40E-05
ppa012321m PACid:17644906	-1.268947736	0.000103054	0.000850831
ppa009209m PACid:17645568	-1.268947736	0.000103054	0.00085025
ppa012943m PACid:17640751	-1.268946803	5.47E-05	0.000482059
ppa008800m PACid:17666840	-1.267531748	1.17E-57	1.10E-55
ppa010552m PACid:17664768	-1.266194747	2.37E-06	2.67E-05
ppa026365m PACid:17664884	-1.266194747	2.37E-06	2.67E-05
ppa000447m PACid:17669265	-1.262505559	2.61E-09	4.29E-08
ppa000464m PACid:17654385	-1.258976189	8.95E-05	0.00074825
ppa001285m PACid:17643754	-1.258515867	1.35E-05	0.000134227
ppa003623m PACid:17655180	-1.258010506	4.75E-05	0.000424584
ppa001064m PACid:17645439	-1.257563725	1.10E-06	1.32E-05
ppa011974m PACid:17659537	-1.254520191	1.27E-12	2.72E-11
ppa004887m PACid:17666330	-1.249119659	2.19E-05	0.000209327
ppa012068m PACid:17668884	-1.249119659	2.19E-05	0.000209162
ppa012040m PACid:17645392	-1.247624967	3.07E-16	8.39E-15
ppa007818m PACid:17651655	-1.240955152	1.02E-05	0.000104167
ppa004422m PACid:17663012	-1.240955152	1.02E-05	0.000104079
ppa005083m PACid:17668625	-1.239629374	1.31E-09	2.23E-08
ppa009033m PACid:17656433	-1.23786383	7.27E-07	8.98E-06
ppa005536m PACid:17669156	-1.236887215	6.72E-05	0.000583315
ppa012294m PACid:17659439	-1.234213286	8.65E-28	3.84E-26
ppa023464m PACid:17640779	-1.231790141	2.81E-29	1.32E-27
ppa006618m PACid:17654435	-1.222820283	6.83E-17	1.92E-15
ppa022557m PACid:17666541	-1.221740061	1.90E-06	2.18E-05
ppa001464m PACid:17648541	-1.213832948	4.13E-07	5.28E-06
ppa000095m PACid:17647200	-1.211126387	4.36E-05	0.000395368
ppa006390m PACid:17667419	-1.210912963	5.66E-21	1.95E-19
ppa012075m PACid:17661699	-1.210697464	6.64E-09	1.04E-07

ppa010234m PACid:17655357	-1.206175528	1.67E-07	2.24E-06
ppa010610m PACid:17668774	-1.202691993	1.16E-36	6.67E-35
ppa009300m PACid:17656541	-1.199226437	6.77E-08	9.58E-07
ppa013537m PACid:17662155	-1.190135897	1.53E-09	2.60E-08
ppa003836m PACid:17656446	-1.188017069	3.00E-101	7.25E-99
ppa010645m PACid:17645748	-1.181391884	1.45E-11	2.90E-10
ppa013861m PACid:17646890	-1.180328666	3.36E-16	9.12E-15
ppa005220m PACid:17662951	-1.174186242	3.53E-10	6.33E-09
ppa026099m PACid:17656664	-1.173907138	3.40E-66	3.77E-64
ppa000012m PACid:17653487	-1.171888402	2.08E-06	2.37E-05
ppa011911m PACid:17640898	-1.169925001	1.81E-05	0.000175667
ppa003878m PACid:17649430	-1.167162235	8.35E-07	1.02E-05
ppa005719m PACid:17645371	-1.167162235	8.35E-07	1.02E-05
ppb008326m PACid:17655951	-1.16411938	3.38E-05	0.000311736
ppa013621m PACid:17640980	-1.160926468	3.65E-10	6.53E-09
ppa008412m PACid:17651171	-1.160397735	1.80E-11	3.57E-10
ppa015669m PACid:17644565	-1.159151606	2.43E-62	2.51E-60
ppa012736m PACid:17650435	-1.158718068	1.34E-06	1.58E-05
ppa002952m PACid:17660414	-1.158372618	6.33E-05	0.000553079
ppa007663m PACid:17648450	-1.158117395	6.22E-06	6.53E-05
ppa004563m PACid:17659708	-1.153782473	2.47E-11	4.87E-10
ppa004818m PACid:17650538	-1.152071923	5.45E-05	0.00048102
ppa013510m PACid:17655432	-1.143702177	3.18E-301	2.56E-298
ppa012587m PACid:17661828	-1.143680445	3.46E-07	4.45E-06
ppa012093m PACid:17659725	-1.140084782	2.99E-07	3.88E-06
ppa024131m PACid:17646265	-1.138386176	6.40E-07	7.98E-06
ppa011378m PACid:17649715	-1.13580949	2.97E-40	1.84E-38
ppa013051m PACid:17652655	-1.135191707	2.79E-80	4.33E-78
ppa001786m PACid:17643860	-1.134986575	6.38E-06	6.68E-05
ppa004908m PACid:17658484	-1.133995144	7.55E-05	0.000647863
ppa001686m PACid:17644861	-1.133995144	7.55E-05	0.000647403
ppa000932m PACid:17650256	-1.128359651	1.19E-05	0.000119434
ppa005275m PACid:17650471	-1.127705439	4.13E-11	7.99E-10
ppa012757m PACid:17660422	-1.126330824	2.57E-05	0.000241595
ppa004431m PACid:17667682	-1.123254568	5.57E-05	0.00049107
ppa013311m PACid:17647503	-1.120411244	2.96E-45	2.08E-43
ppa006479m PACid:17650905	-1.114403055	4.86E-07	6.14E-06
ppa001730m PACid:17651686	-1.10524316	7.67E-05	0.000657415
ppa012119m PACid:17661304	-1.103490728	5.21E-14	1.23E-12
ppa004334m PACid:17660758	-1.102980232	6.64E-07	8.25E-06
ppa002793m PACid:17652246	-1.102780474	4.14E-06	4.50E-05
ppa013635m PACid:17658458	-1.102260728	1.10E-13	2.56E-12
ppa012965m PACid:17660893	-1.101541978	1.61E-12	3.44E-11
ppb021781m PACid:17649828	-1.101209385	1.84E-18	5.70E-17

ppa006016m PACid:17655899	-1.097554341	2.62E-10	4.78E-09
ppa006662m PACid:17641716	-1.096813775	8.83E-15	2.20E-13
ppa013455m PACid:17647298	-1.0932219	2.63E-06	2.93E-05
ppa023976m PACid:17650999	-1.091712314	1.65E-05	0.000162208
ppa016754m PACid:17655837	-1.086796562	9.05E-19	2.85E-17
ppa003707m PACid:17649749	-1.085654863	2.29E-10	4.19E-09
ppa015170m PACid:17658294	-1.084606873	3.96E-09	6.45E-08
ppa010397m PACid:17657053	-1.070486221	1.66E-05	0.000162884
ppa010980m PACid:17644257	-1.065661759	5.39E-09	8.59E-08
ppa010028m PACid:17647481	-1.064934898	3.58E-05	0.000328689
ppa009471m PACid:17641095	-1.064934898	3.58E-05	0.00032844
ppb018874m PACid:17664579	-1.062267044	5.86E-15	1.47E-13
ppa020061m PACid:17664797	-1.061784692	3.16E-07	4.09E-06
ppa012933m PACid:17660914	-1.05697471	4.05E-101	9.60E-99
ppa000667m PACid:17664698	-1.055015474	1.96E-06	2.23E-05
ppa008582m PACid:17663444	-1.054698729	5.16E-08	7.39E-07
ppa012063m PACid:17648528	-1.047683151	3.59E-06	3.93E-05
ppa020372m PACid:17644030	-1.04368674	1.40E-61	1.42E-59
ppa011201m PACid:17656874	-1.042840618	9.81E-16	2.61E-14
ppa022781m PACid:17643273	-1.039340892	6.59E-06	6.88E-05
ppa005938m PACid:17653821	-1.037874652	1.09E-07	1.50E-06
ppa008306m PACid:17644234	-1.035501584	4.85E-06	5.18E-05
ppa012553m PACid:17653229	-1.03360719	1.06E-06	1.27E-05
ppa009288m PACid:17661086	-1.031823318	5.10E-08	7.33E-07
ppa012003m PACid:17650941	-1.029945401	3.77E-08	5.46E-07
ppa011243m PACid:17668345	-1.02976275	1.04E-16	2.91E-15
ppa011828m PACid:17667327	-1.029343962	4.83E-05	0.000431171
ppa009193m PACid:17658815	-1.028372498	1.85E-09	3.11E-08
ppa022680m PACid:17666197	-1.027055351	8.89E-06	9.16E-05
ppa001534m PACid:17664605	-1.026956477	1.78E-11	3.55E-10
ppa012251m PACid:17651383	-1.023482565	3.26E-36	1.83E-34
ppa013088m PACid:17666531	-1.013512697	9.32E-16	2.48E-14
ppa012891m PACid:17656691	-1.008377349	1.67E-07	2.24E-06
ppa004884m PACid:17647851	-1.006687575	6.29E-17	1.78E-15
ppa013414m PACid:17643791	-1.00414622	4.87E-11	9.35E-10
ppa011067m PACid:17647317	-1.003545863	2.50E-26	1.07E-24

Supplementary Table S6 The correlation between the differentially expressed proteins and genes in the whole library. The X is the expression quantity of the differentially expressed proteins and the Y is the expression quantity of genes in the whole library.

^a Spot No	Protein	Gene	X	Y
31	ppa005617	ppa005617m PACid:17664214	1.831877241	-1.68968165
21	ppa011448	ppa011448m PACid:17646081	-6.64385619	5.292282633
27	ppa007748	ppa007748m PACid:17651918	2.939226578	-0.335708945
2	ppa003391	ppa003391m PACid:17655389	1.545968369	0.06529146
30	ppa010413	ppa010413m PACid:17642780	-2.13093087	0.623933732
18	ppa004554	ppa004554m PACid:17664318	1.422233001	-0.359081093
32	ppa007242	ppa007242m PACid:17668944	1.859969548	-0.762276683
1	gi 2460186	ppa012651m PACid:17642469	-1.765534746	-6.882643049
11	ppa004430	ppa004430m PACid:17665888	-1.350497247	0.388301771
23	gi 374671153	ppa010748m PACid:17648023	1.378511623	2.231099117
35	ppa006226	ppa006226m PACid:17663253	-1.411426246	-0.155119067
6	ppa010479	ppa010479m PACid:17642602	2.807354922	0.705700372
9	ppa007696	ppa007696m PACid:17669094	1.604071324	-0.421741167
19	ppa004726	ppa004726m PACid:17655111	-1.510961919	0.124847848
20	ppa011112	ppa011112m PACid:17657156	1.765534746	0.801900492
33	gi 33772153	ppa013109m PACid:17643063	1.339137385	-1.090828978
28	gi 381283804	ppa009729m PACid:17666637	1.438292852	0.638245233
8	ppa007154	ppa007186m PACid:17659073	1.459431619	-0.116917752
16	gi 4650846	ppa007772m PACid:17658645	1.280956314	-0.561145471

^a Numbering corresponds to the 2-DE gel in Fig. 2.

Supplementary Fig. S1 Morphology changes before and after the dormancy break in Japanese apricot. A represents the endodormancy of the flower bud, and B represents green tips, showing that the flower buds of Japanese apricot have broken their dormancy.

Supplementary Fig. S2 Experimental design associated with dormancy release in Japanese apricot.

Supplementary Fig. S3 Experimental process of digital gene expression profile.

Supplementary Fig. S4 The images of the original gels and the matchsets appearing in Fig. 2.

Supplementary Fig. S5 Histogram showing pathway enrichment analysis for differentially expressed genes in Japanese apricot after GA₄ treatment (10 days).

Supplementary Fig. S6 Real-time qPCR validations of tag-mapped genes are shown in A, and B represents the scatter plots which indicated the cycle threshold (Ct) value of qRT-PCR analysis and the log₂ transcripts per million tags value of differentially expressed genes.

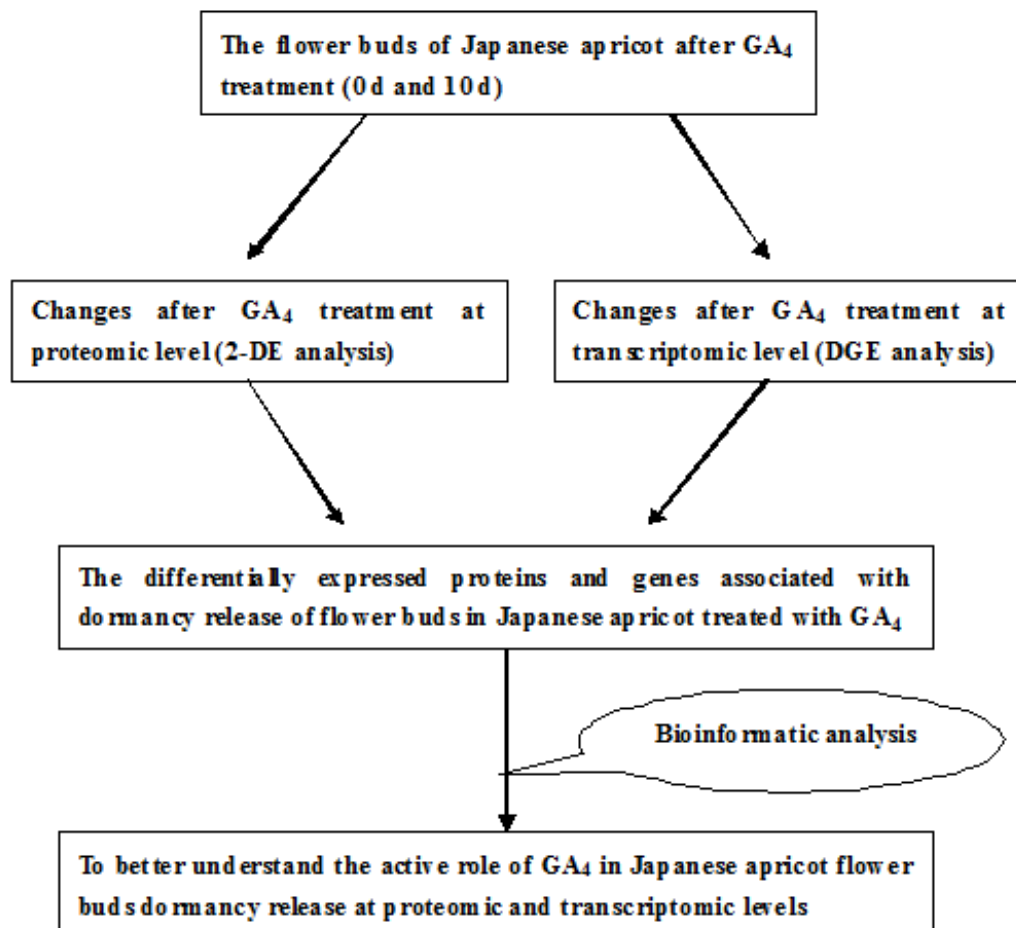
Supplementary Fig. S7 Correlation between the differentially expressed proteins and genes in the whole library.

Supplementary Fig. S8 The principal component analysis of the whole library genes (A), differentially expressed genes (B) and differentially expressed proteins (C). Each spot represents an expressed gene; the black spot represents an up-regulated gene, and the red spot represents down-regulated gene. In A, B and C, the cumulative contribution rate (including the contribution rate of the first principal component and the second principal component) was more than 0.999999, which showed the significance between the up-/down-regulated genes/proteins and the expressed genes/proteins.

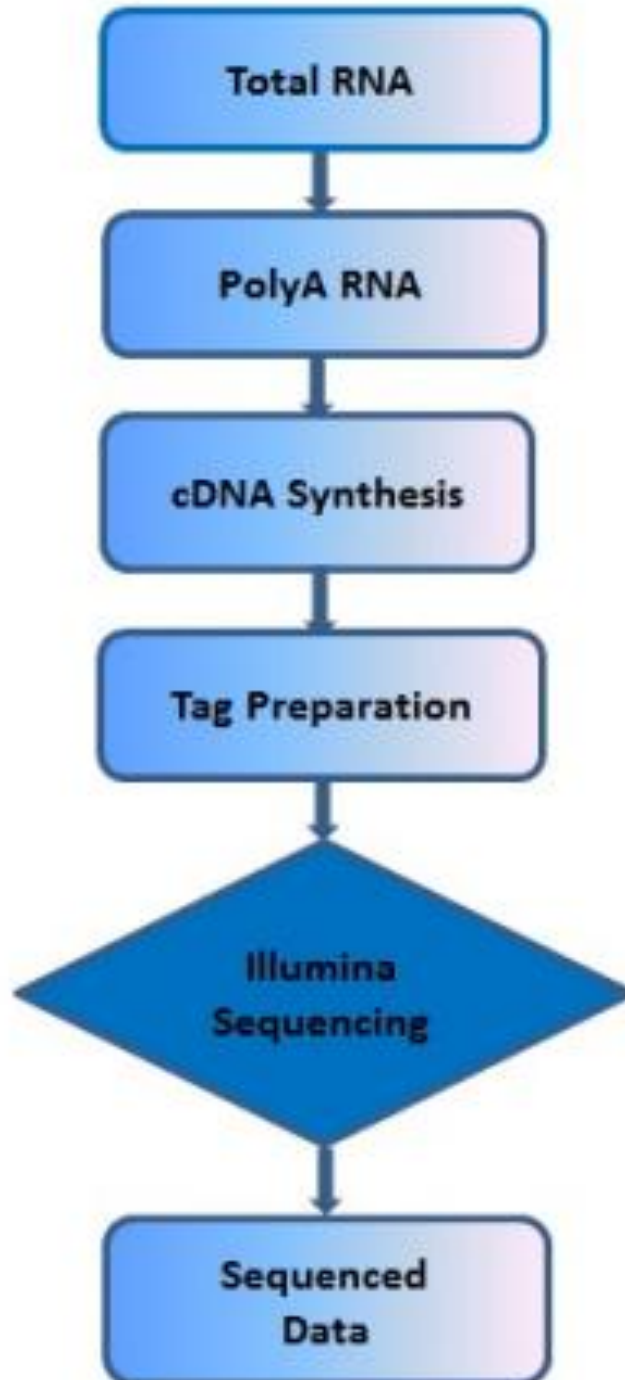
Supplementary Fig. S1



Supplementary Fig. S2

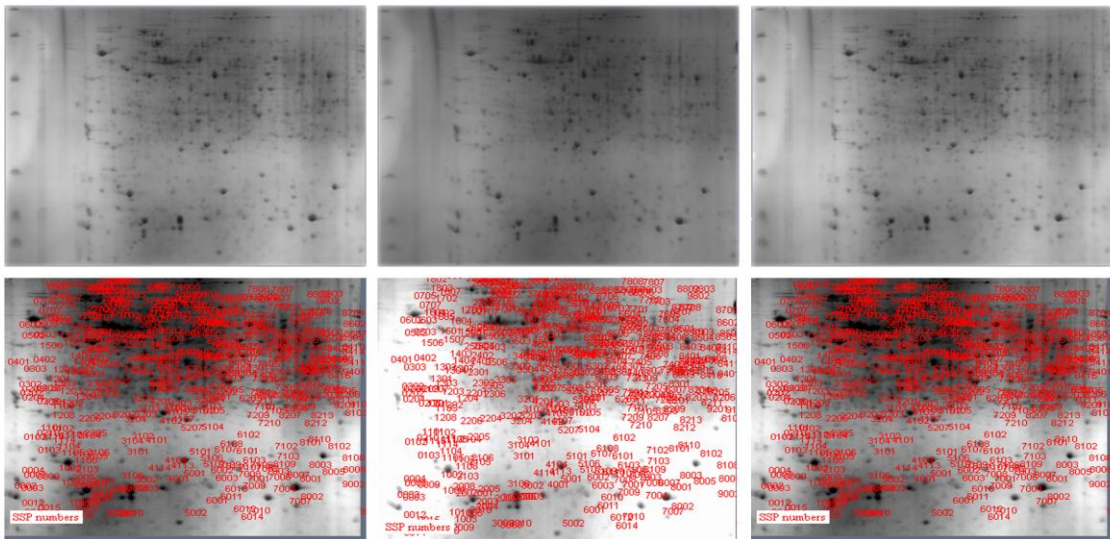


Supplementary Fig. S3

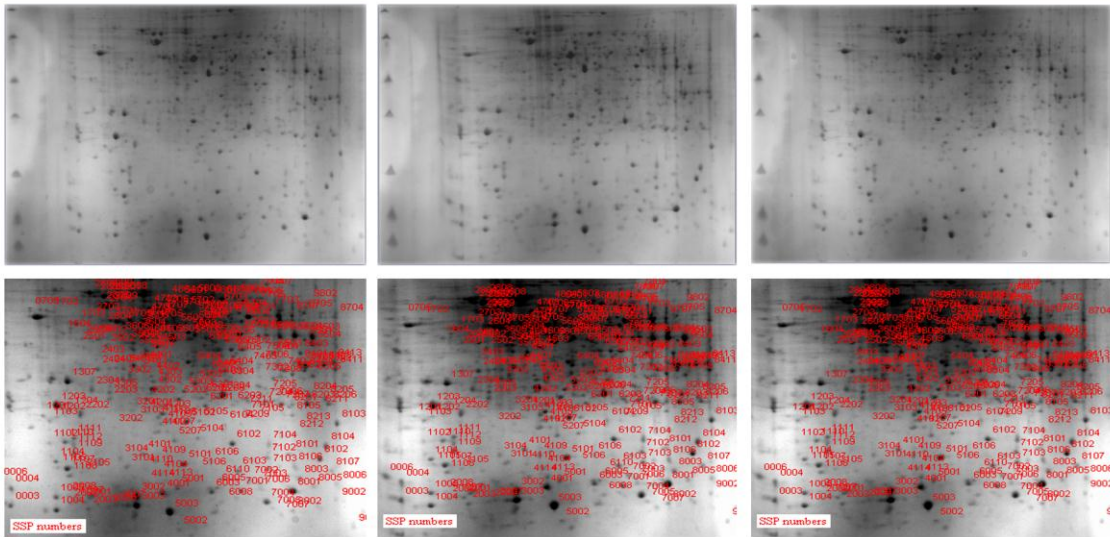


Supplementary Fig. S4

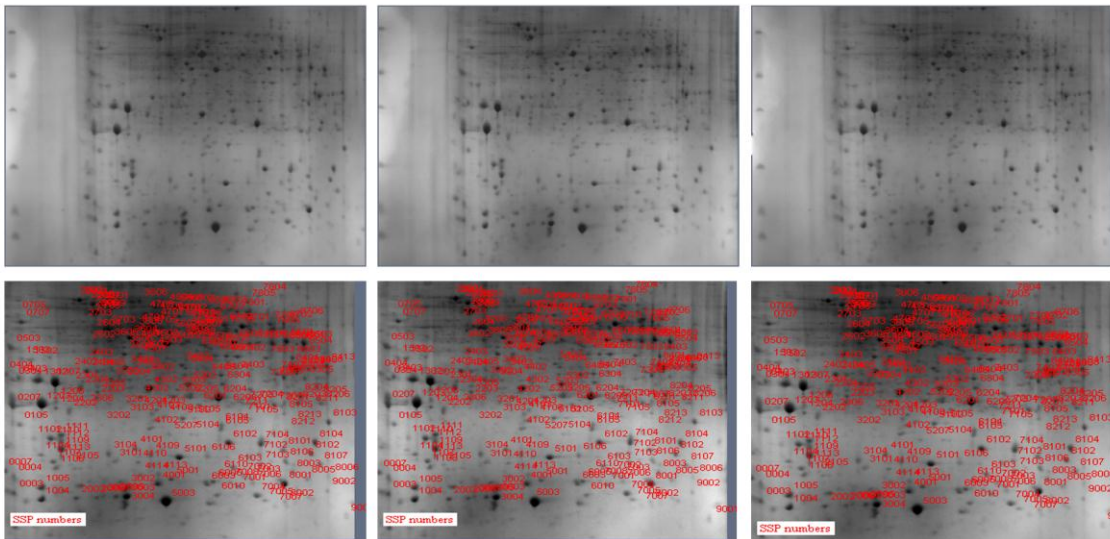
Control



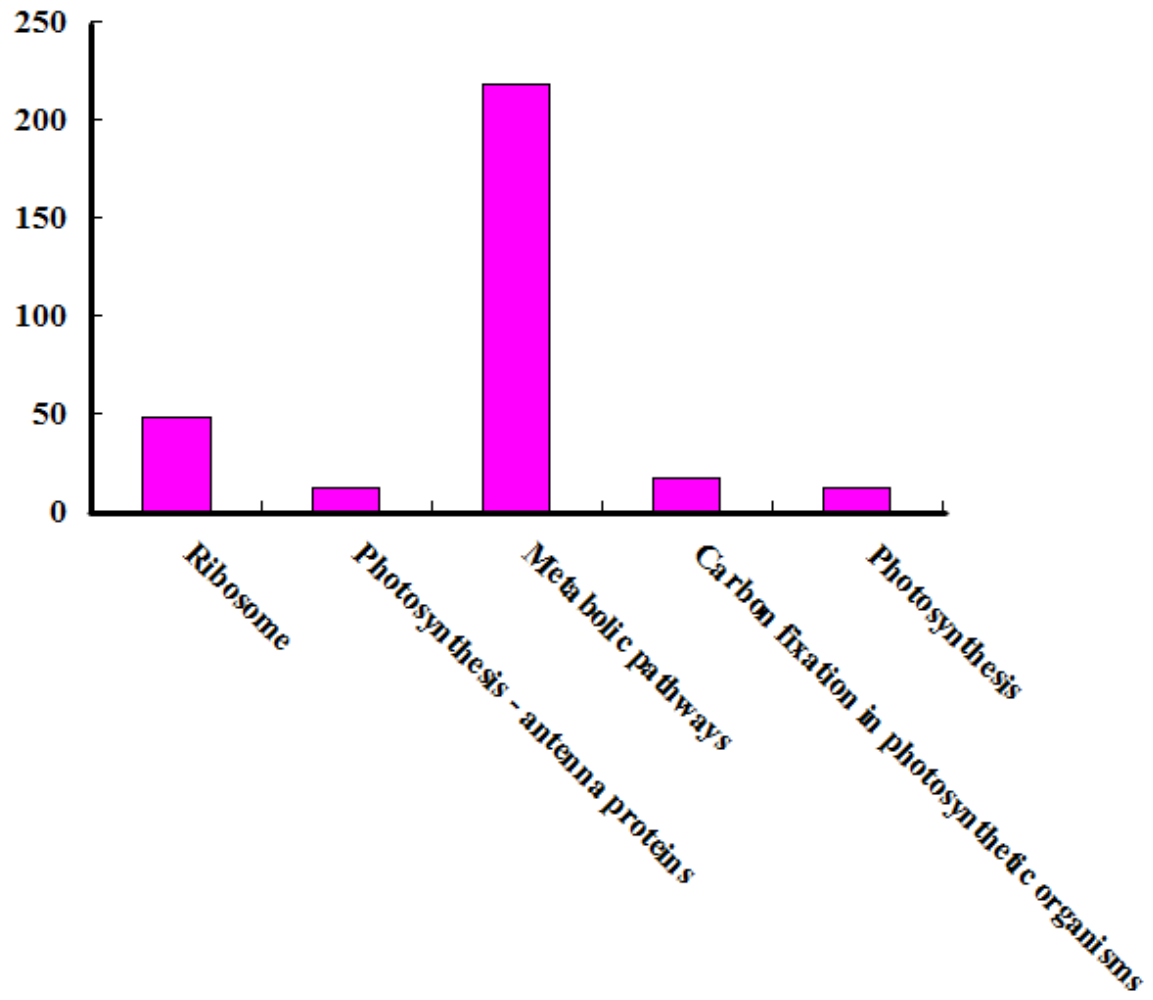
W10



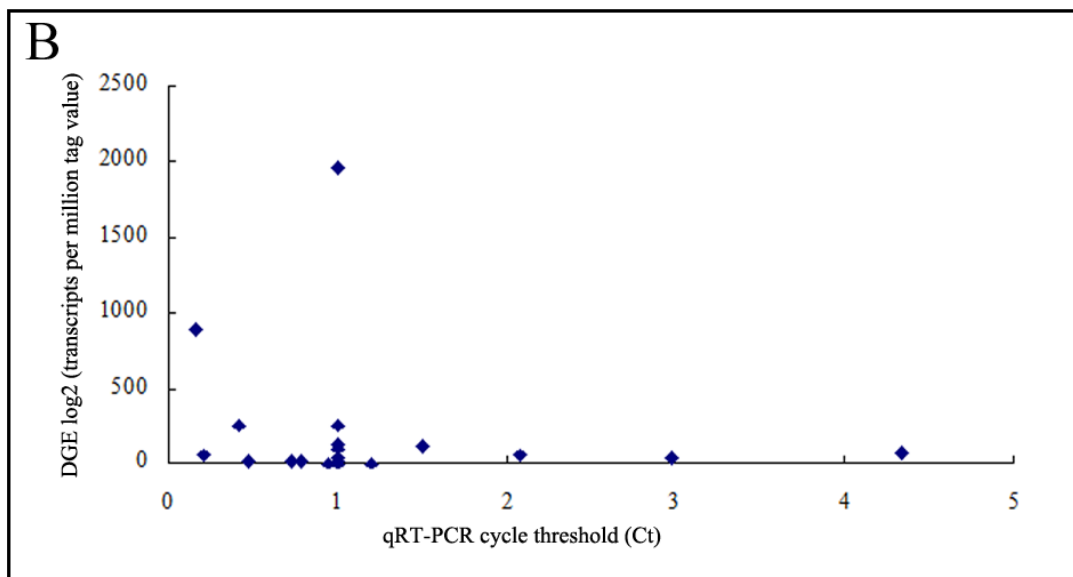
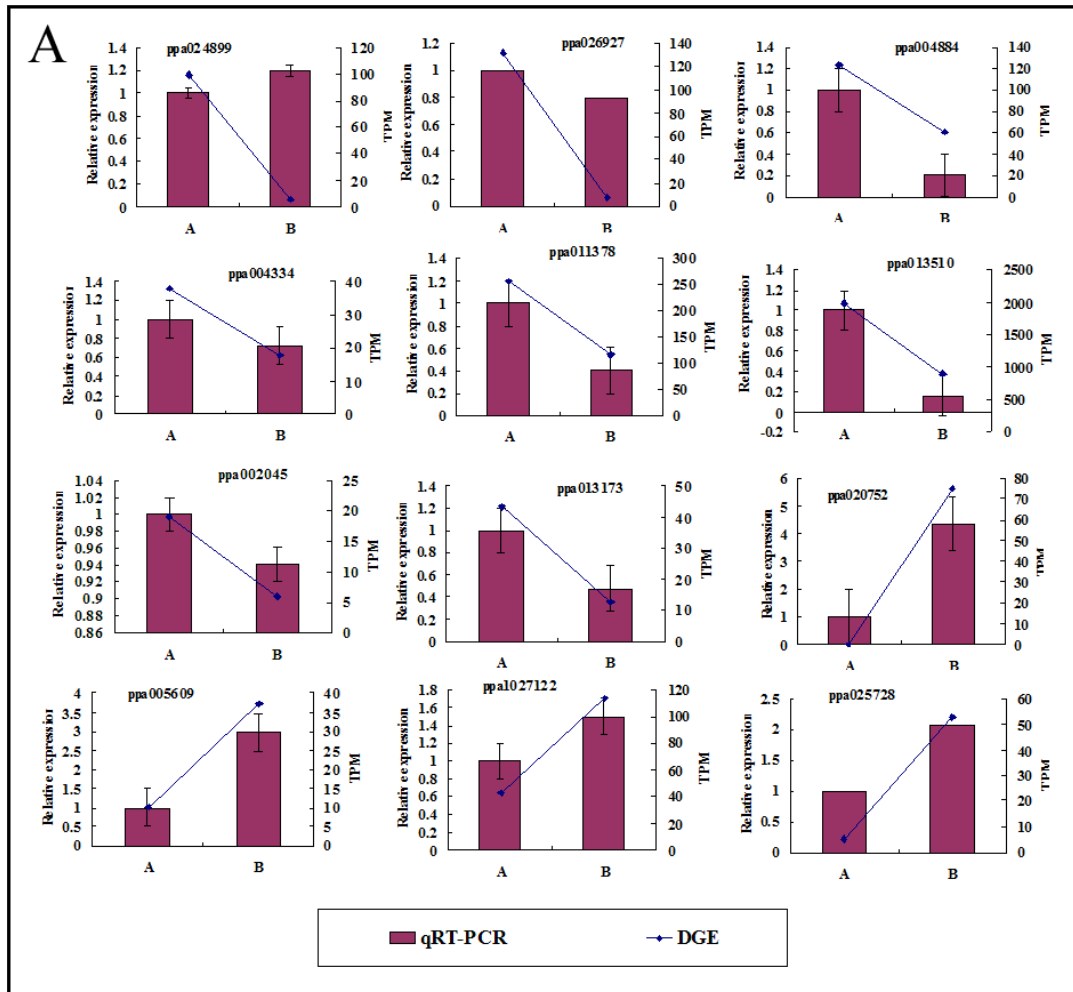
G10



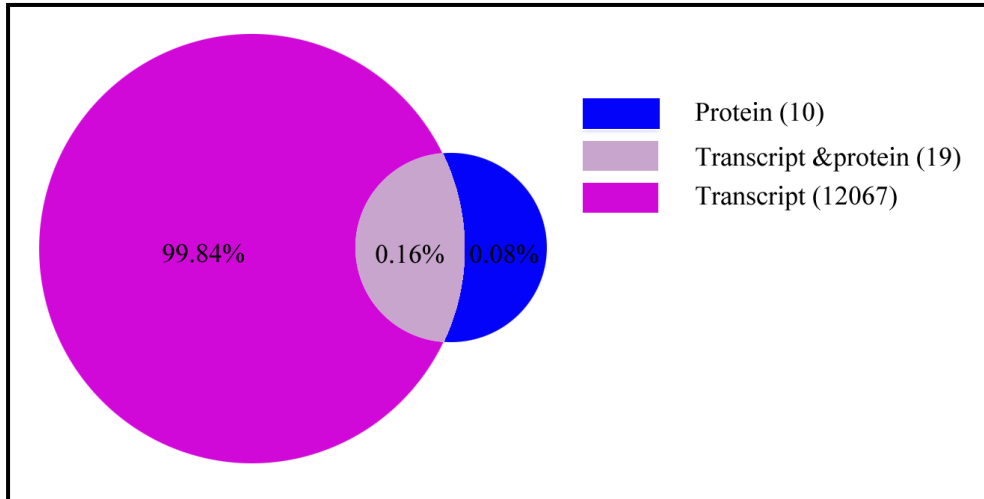
Supplementary Fig. S5



Supplementary Fig. S6



Supplementary Fig. S7



Supplementary Fig. S8

