

KS3 Group 3A

Sequence	Distance	Sequence	Distance	Sequence	Distance
ZP_05517699.1	0.06999	BAH67106.1	0.05131	BAH67602.1	0.16383
BAH67370.1	0.12723	ACZ54305.1	0.14903	BAH66979.1	0.11763
BAH67532.1	0.08887	ZP_05519879.1	0.14848	BAH67529.1	0.20855
BAH68114.1	0.13251	BAH67496.1	0.02967	BAH67498.1	0.05744
ZP_04711974.1	1.40E-04	ZP_04696781.1	1.40E-04	BAH68050.1	0.06071
BAH67740.1	0.11595	BAH67589.1	0.19836	ZP_06711000.1	0.0925
ZP_06710999.1	0.08986	BAH67630.1	0.08667	BAH67631.1	0.11709
ADI06300.1	0.33713	BAH67426.1	0.05933	AAQ84144.1	0.01132
YP_003512879.1	0.27989	YP_003512878.1	0.20051	YP_003512877.1	0.29434
BAC57032.1	0.21738	ABB52545.1	0	ZP_05001884.1	0
AAS79463.1	0.00822	ABY21542.1	0.18706	AAB66508.1	0.12883
ZP_05512308.1	0.25878	BAH68307.1	0.31478	AAQ84147.1	0.2516
AAC46027.1	0.11078	BAH67034.1	0.01296	BAH67154.1	0.02089
BAH67035.1	0.0071	BAH67153.1	0.03564	BAH67257.1	0.05089
AAC46028.1	0.12328	BAH67036.1	1.60E-04	BAH67142.1	0.00945
BAH67144.1	0.08216	BAH67143.1	1.60E-04	BAH67155.1	0.02785
BAH67258.1	0.09451	BAH66922.1	0.01095	AAC46025.1	0.03332
BAH66923.1	0.09946	BAH66924.1	0.05131	YP_712782.1	0.13437
AAL07759.1	0.17377	ACZ54336.1	0.12904	ACY06286.1	0.28856
YP_003450268.1	0.23519	YP_003493456.1	0.13055	YP_048719.1	0.15114
ZP_04589972.1	0.00269	NP_794436.1	1.50E-04	AAD03048.1	0.01741
ZP_06483082.1	1.50E-04	YP_001508186.1	0.0278	ZP_06416311.1	0.07966
BAF85837.1	0.21113	BAH67557.1	0.13804	BAH67456.1	0.12198
ABB05102.1	0.23182	AAQ84156.1	0.26966	BAH67107.1	0.05638
BAH67441.1	0.05248	BAH67301.1	0.043	BAH66936.1	0.03295
BAH67924.1	0.00305	BAH67908.1	1.40E-04	BAH67834.1	0.00304
BAH67753.1	0	BAH67837.1	0	BAH67843.1	0
AAAY57523.1	0	ZP_04700405.1	0	BAH67310.1	0.14195
BAH67039.1	0.2422	ACZ54318.1	0.24531	ACZ54317.1	0.08242
BAH67255.1	0.00477	BAH66977.1	0.01554	BAH67299.1	0.01252
BAH67412.1	0.00623	BAH67000.1	1.40E-04	BAH67001.1	0.00309
YP_003648399.1	0.38291	YP_003648398.1	0.37906	BAH67452.1	0.23332
ACR61384.1	0.00998	ACR61386.1	0.00489	ACR61382.1	0.00561
ACX31694.1	0	ACX31702.1	0	ACX31697.1	0.00464
ACN13118.1	1.40E-04	ACN13119.1	0	ACR61385.1	0
ACX31709.1	0.00464	ACX31701.1	1.40E-04	ADE08338.1	0.00464
ACN13121.1	0.00477	ACR61383.1	1.40E-04	YP_888785.1	0.12746
NP_216898.1	0	NP_336931.1	0	ZP_06800203.1	0.00272
YP_640631.1	0.00547	YP_001071748.1	1.50E-04	YP_954634.1	0.1566
ZP_04747689.1	0.17192	ZP_06852164.1	0.05998	ZP_05216252.1	0.00823
ZP_05226626.1	0.0055	NP_961109.1	0.00831	YP_881230.1	0.00274
YP_001133959.1	0.2168	YP_003649222.1	0.3947	YP_003271856.1	0.2536

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YP_001702855.1	0.20116	ZP_04748585.1	0.12798	YP_001851965.1	0.00166
YP_907241.1	0.00392	YP_116973.1	0.19146	ACZ54284.1	0.31624
ACZ54335.1	0.28	ZP_05529780.1	0.49961	ACZ54319.1	0.15684
BAH67210.1	0.04189	BAH67464.1	0.05273	BAH67176.1	0.02945
BAH67806.1	0.04448	ADI03828.1	0.01093	ADC45515.1	0.01531
BAH66937.1	0.14454	pdb2HG4A	0.11563	ADI11520.1	0
AAP42872.1	0	ZP_06574377.1	0	ZP_04683624.1	0
YP_001848424.1	0.5207	ZP_04696759.1	0	ZP_06587679.1	0
ZP_04711951.1	0	NP_851457.1	0.1014	AAU93807.2	0.20438
AAG13917.1	0.08547	YP_001102988.1	0	spQ03131.1	0
ZP_06567595.1	0	AAV39550.1	1.30E-04	YP_003102283.1	0.10909
ZP_06773938.1	1.40E-04	ZP_05007821.1	1.40E-04	ZP_04333100.1	0.27919
AAO65790.1	0.3427	ABC84465.1	0.08982	ZP_05520494.1	0.10331
ZP_04333099.1	0	ADH65943.1	0	BAH66938.1	0.20305
pdb2QO3A	0.11179	YP_003450267.1	0.28708	YP_003493455.1	0.15858
YP_048720.1	0.08196	ZP_04589079.1	1.40E-04	NP_794435.1	1.40E-04
AAD03047.1	1.40E-04	ZP_06483087.1	1.60E-04	ZP_06459851.1	1.40E-04
ZP_05480317.1	0.43935	BAH67118.1	0.22476	BAH67037.1	0.21279
YP_003512876.1	0.19192	BAH67475.1	0.21467	BAH67650.1	0.13309
BAH66931.1	0.07674	BAH67272.1	1.60E-04	BAH67271.1	0.00307
BAH67717.1	0.03453	BAH67327.1	0.01577	BAH67296.1	0.00975
BAE93728.1	0.16451	CAI30443.1	0.24512	BAH67330.1	0.17954
BAH67855.1	0.01172	ZP_05519893.1	0.00791	BAH67474.1	0.16709
ZP_05519889.1	0.05397	ACO94484.1	0.06634	BAH67361.1	0.08461
BAH67899.1	0.00715	BAH67856.1	0.00219	ZP_05519891.1	0.00315
BAH68144.1	0.00963	BAH68148.1	0.01281	ACR61387.1	1.50E-04
ACN13114.1	1.40E-04	BAH67599.1	0.02506	BAH67495.1	0.01689
BAH68254.1	0.01902	BAH68036.1	0.01885	BAH68032.1	0.00311
BAH68043.1	0.03549	ADB23403.1	0.14151	YP_003300364.1	0.24789
ACZ54351.1	0.15761	BAH67267.1	0.03522	BAH67268.1	0.00302
BAH67269.1	0.01908	BAH67807.1	0.1266	BAH67211.1	0.10643
BAH67808.1	0.05276	AAB66507.1	0.15625	ABY21541.1	0.05106
BAC57031.1	0.15929	AAS79462.1	0.02706	ZP_05001885.1	0.00274
ABB52544.1	0.00269	BAH66927.1	1.40E-04	AAC69331.1	0.01178
BAH66928.1	0.11311	BAH66929.1	0.03516	BAH67214.1	0.03758
ACZ54316.1	0.26642	ZP_05529788.1	0.03192	ZP_05529767.1	0.08393
BAH67861.1	0.22616	ACS45097.1	0.1031	ACS45087.1	0.08811
ACS36475.1	0.04351	BAH68306.1	0.12621	BAH68304.1	0.05632
BAH68305.1	0.05032	ACS45081.1	0.06019	ACS45092.1	0.06912
BAH68262.1	0.17336	ZP_06275956.1	0.1936	BAH68269.1	0.23357
BAH68260.1	0.12786	BAH67526.1	0.03705	BAD27470.1	0.06334
BAH67512.1	1.50E-04	ABI93779.1	0.22679	ZP_05512310.1	0.1434
ZP_05512311.1	0.03376	ZP_05512312.1	0.08784	BAH68215.1	0.01737

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BAH67769.1	0.0248	AAK73503.1	0.08995	ABV83223.1	0.11281
AAF71768.1	0.05714	BAH57741.1	0.20407	BAH67836.1	0
BAH67237.1	0	ZP_04700408.1	1.50E-04	BAH67918.1	0.01209
BAH67754.1	0.00907	BAH67833.1	0.00907	BAH67895.1	0
BAH67841.1	0	BAH67450.1	0.09188	BAH67368.1	0.03735
ZP_04700407.1	0.02994	BAH67770.1	0.00729	BAH68217.1	0.01397
BAH67698.1	0.00703	BAH67449.1	0.09865	BAH67305.1	0.0094
BAH67304.1	0.00314	BAH68034.1	0.08699	BAH67756.1	0.01518
BAH67922.1	1.50E-04	BAH67414.1	0.16929	AAZ93570.1	0.08943
CAC20919.1	0.09342	BAH67424.1	0.08417	BAH67366.1	0.01219
BAH67757.1	1.40E-04	AAQ82566.1	0	ZP_04700406.1	0
BAH67767.1	1.40E-04	ADI05106.1	0.19644	BAH57742.1	0.17431
ZP_04700411.1	0.11736	BAH67481.1	0.06618	ZP_05512309.1	0.2196
ABV83228.1	0.21785	AAK73512.1	0.16309	AAF71774.1	0.06632
BAH67406.1	0.15096	BAH67416.1	0.04274	BAH67814.1	0.02678
BAH67470.1	0.03054	CAC20920.1	0.00956	BAH67245.1	0.04097
BAH67265.1	0.08413	BAH67369.1	0.05089	BAH67850.1	0.06956
BAH67075.1	0.19697	BAH67006.1	0.1664	ADI11519.1	0
AAP42873.1	0	BAH67689.1	0.0079	BAH67973.1	0.01251
BAH67939.1	0.00614	BAH68292.1	0.23075	BAH67921.1	0.14926
ADC68469.1	0.29653	ZP_06283109.1	0.21241	ABC87512.1	0.12412
AAG23265.1	0.18923	BAH67232.1	0.04541	BAH67335.1	0.04047
ADC68491.1	0.20342	BAH67758.1	0.0067	ZP_04700403.1	0
ZP_06589189.1	0	BAH67266.1	0.04795	BAH67440.1	0.08099
BAH67413.1	0.05315	BAH67425.1	0.11212	BAH67311.1	1.40E-04
BAH67281.1	0.00307	BAH68069.1	0.18958	ZP_06217035.1	0.14419
ACZ54334.1	0.19934	ZP_05000639.1	0.18818	BAH67146.1	0.19113
BAH67145.1	0.14688	ZP_05517701.1	0.02284	BAH68134.1	0.03487
BAH67389.1	0.09751	BAH68068.1	0.10494	BAH67056.1	0.02477
BAH67858.1	0.00309	ZP_05517703.1	1.50E-04	ZP_05517705.1	0.16779
BAH68067.1	0.07074	BAH67390.1	0.06738	BAH67201.1	0.07749
ZP_05517711.1	0.04696	BAH67109.1	0.09471	BAH67059.1	0.02148
BAH66987.1	0.02271	BAH67163.1	0.0397	BAH67058.1	0.00834
BAH67387.1	0.23261	BAH67391.1	0.06686	BAH67911.1	0.03903
ZP_05517713.1	0.01634	AAX98187.1	0.03105	ZP_05000629.1	0.03387
BAH67057.1	0.10507	BAH68062.1	0.06313	ZP_04683623.1	0.02064
CAQ64691.1	0	BAG85031.1	0	BAH67090.1	0.19251
ZP_06397564.1	0.19641	BAH67117.1	0.04757	BAH67346.1	0.07514
ZP_06221112.1	0.16245	ADC68437.1	0.08155	BAH67646.1	0.0307
BAH67983.1	0.20331	ADC68502.1	0.2784	ADC68494.1	1.50E-04
ADC68462.1	0.02256	ADC68467.1	0.17463	BAH67486.1	0.03556
BAH67471.1	0.07643	BAH66982.1	0.06866	ZP_04700412.1	0.1059
BAH67448.1	0.06649	ADC68461.1	0.16144	ZP_04604292.1	0.24484

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ZP_05511740.1	0.15866	ADC68464.1	0.12108	BAH02271.1	0.2453
ABB88536.1	0.17149	YP_001106332.1	0	ZP_06568061.1	0
ABB88523.1	0.18449	ADC68487.1	0.1916	BAH67292.1	0.14948
ZP_05511739.1	0.12983	ADC68506.1	0.01655	ADC68504.1	1.40E-04
BAH67218.1	0.24201	BAH67812.1	0.00289	BAH67951.1	1.40E-04
BAH67972.1	0.00302	BAH67987.1	0.00907	BAI44049.1	0.24162
BAH67801.1	0.23311	BAH67776.1	0.25353	BAH67216.1	0.17898
BAH67549.1	0.28945	BAH68031.1	0.09162	BAH67099.1	0.02778
BAH67100.1	0.02889	BAH67129.1	0.19767	BAH68007.1	0.06759
BAH67540.1	0.06233	BAH67897.1	0.21888	BAH67002.1	0.00382
BAH67231.1	0.00928	BAH67436.1	0.03022	BAH68092.1	0.00651
BAH67337.1	0.00327	BAH67003.1	0.05033	BAH68003.1	0.05207
BAH67442.1	0.01599	BAH67438.1	0.01026	BAH68093.1	0.07758
BAH67926.1	0.151	BAH67277.1	0.00956	BAH67306.1	0.01026
BAH67308.1	0.16323	ACZ54365.1	0.21998	BAH68065.1	0.20687
ZP_04683617.1	0	ZP_06574371.1	0	BAI44059.1	0.10459
BAH67887.1	0.00294	BAH68090.1	0.00637	BAH66976.1	0.07011
BAH67702.1	0.03491	BAI44038.1	0.00296	BAH67704.1	0.0126
BAH67743.1	0.03587	BAH67886.1	0.0214	BAH67706.1	0.11677
BAI44039.1	0.07319	BAH66974.1	0.04217	BAH67883.1	0.03801
BAH67744.1	0.08206	BAH67888.1	0.11088	ZP_06217030.1	0.07605
ZP_06399904.1	0.09217	BAH67309.1	0.00907	BAH67279.1	0.00628
BAH67480.1	0.00987	BAH67009.1	1.40E-04	BAH67403.1	0.07957
CAE45672.1	0.10743	BAH67400.1	0.1019	BAH67399.1	0.03218
CAE45668.1	0.07706	BAH67787.1	0.21361	BAH68026.1	0.19741
ZP_05806326.1	0.05372	BAH67641.1	0.03848	BAH67643.1	0.02035
BAH67192.1	0.15286	BAH68263.1	0.2292	BAH67386.1	0.21196
ACZ54309.1	0.21857	ZP_04608884.1	0.15874	ZP_04696767.1	0
ZP_06587688.1	0	BAH67497.1	0.22567	ACZ54304.1	0.01089
ACZ54308.1	0.01316	BAI44046.1	0.23151	ZP_05514799.1	0.13837
BAH67809.1	0.15272	BAH67928.1	1.40E-04	BAH67772.1	0.02483
BAH68155.1	0.00614	ADC68468.1	0.23293	BAH67077.1	0.11617
BAH67493.1	0.01533	BAH67494.1	0.02251	BAH67185.1	0.08819
BAH68070.1	0.00612	BAH68049.1	0.00925	BAH68028.1	0.00924
ZP_05514797.1	0.2076	BAH67938.1	0.03105	BAH67913.1	0.01293
BAH67091.1	0.01197	ZP_05514812.1	0.14696	ADI04662.1	0.04875
ADI04665.1	0.13835	BAH67353.1	0.17072	BAH67356.1	0.10844
CAQ64688.1	0.00573	BAG85028.1	0.02503	BAH67476.1	0.25608
BAH67326.1	0.04221	BAH67325.1	0.019	BAH67383.1	0.05602
BAH67724.1	0.24076	BAH67954.1	0.15408	BAH67503.1	0.00938
BAH67969.1	1.40E-04	BAH67567.1	0.23396	BAH66942.1	0.24589
ADI04504.1	0.17967	BAH67047.1	0.10431	ZP_05511711.1	0.08271
BAH67614.1	0.04304	BAH68064.1	0.03066	BAH67131.1	1.60E-04

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BAH67901.1	0.00617	BAH67334.1	0.07414	BAH67233.1	1.40E-04
BAH67236.1	0.02741	AAQ84145.1	0.19078	BAH67736.1	0.20074
BAH67737.1	0.24865	BAH66948.1	0.0217	AAC38061.1	0.02675
AAC38062.1	0.1254	AAC38063.1	0.19568	BAH66952.1	0.05941
AAC38064.1	0.05214	BAH66949.1	0.01605	BAH67247.1	0.10081
BAH67248.1	0.11878	BAH67062.1	0.24061	AAQ84146.1	0.24258
YP_001537950.1	0.19949	YP_001537951.1	1.40E-04	ACZ54296.1	1.40E-04
ZP_06235299.1	0.24489	BAH67321.1	0.06864	BAH67169.1	0.16764
ZP_05520499.1	1.60E-04	BAH67852.1	0.0277	ABC84469.1	0.04062
BAH67992.1	0.00356	BAH67985.1	0.02109	BAH67936.1	0.06154
BAH67857.1	0.00826	ZP_05520503.1	0.03171	BAH68181.1	0.0127
ZP_05520501.1	0.02694	ABC84470.1	0.06959	BAH67073.1	0.14946
ADC68427.1	0.21455	ZP_05520489.1	0.03961	BAH67161.1	0.03832
ABC84461.1	0.02539	BAH68132.1	0.02189	ADI11532.1	1.50E-04
AAP42860.1	0.00763	ADC68498.1	0.00564	AAO65801.1	0.04771
BAH67110.1	0.11511	BAH67072.1	0.00843	BAH67418.1	0.02181
AAO65797.1	0.13432	ADI11536.1	0.00264	AAP42856.1	1.50E-04
ZP_05520470.1	0.06848	ABC84457.1	0.02826	BAH67087.1	0.04162
BAH67060.1	0.02673	ZP_05520481.1	1.50E-04	BAH68222.1	0.00313
BAH68147.1	1.40E-04	BAH67502.1	1.40E-04	BAH67968.1	0.00305
BAH66988.1	0.06027	ZP_05520484.1	0.05565	BAH67958.1	0.06679
BAH67845.1	0.09861	BAH66972.1	0.23695	ZP_06241124.1	0.15194
ZP_06240939.1	0.23568	ZP_06240938.1	0.15088	YP_001852061.1	0.22049
YP_001852064.1	0.16716	YP_025561.1	0.00246	AAQ74421.1	0.01402
YP_002274115.1	1.60E-04	YP_001849493.1	0.08868	ZP_04747737.1	0.02939
ZP_06418133.1	0.24297	YP_001538076.1	0.01749	YP_001159871.1	0.02234
ACZ54310.1	0.04349	ZP_06413190.1	0.10479	YP_001508558.1	0.07676
ZP_06234807.1	0.09473	YP_001507404.1	0.05588	YP_482067.1	0.0667
YP_713655.1	0.09439	BAH67065.1	0.21004	YP_001507779.1	0.22272
BAH67815.1	0.11607	BAH67816.1	0.09419	ACI24634.1	0.01954
ACI24639.1	0.02779	BAH68281.1	0.16264	ACI24636.1	0.1402
BAH67735.1	0.20867	ZP_06240941.1	0.21125	ZP_06240940.1	0.15918
BAH68291.1	0.15372	BAH67830.1	0.17739	BAH67637.1	0.20266
BAH67565.1	0.14836	BAH66966.1	0.05327	BAH66968.1	0.02932
BAH66967.1	0.03891	BAH66971.1	0.03134	BAH67882.1	0.01473
BAI44036.1	0.03895	BAI44037.1	0.04048	BAI44060.1	0.04148
BAH67085.1	0.2003	BAH67360.1	0.17773	YP_003102132.1	0.198
YP_001827882.1	0	ZP_06282332.1	0	YP_003102374.1	0.19663
ZP_05529707.1	0.20144	ACI24627.1	0.03014	BAH68227.1	1.50E-04
BAH68216.1	0.00639	BAH66930.1	0.1163	NP_630372.1	1.60E-04
AAF43113.1	0.04083	ZP_05533189.1	0.1532	BAH67298.1	0.02425
BAH68191.1	0.00633	ACZ54329.1	0.00484	BAH67872.1	0.00636
BAH68203.1	0.00321	BAH68183.1	0.0032	BAH67697.1	1.40E-04

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BAH68161.1	0.14884	ADC68505.1	0.25871	ZP_06283346.1	0.24783
ZP_04604285.1	0.11657	NP_821592.1	0.31799	BAH68011.1	0.14116
ADC68497.1	0.17034	BAH68012.1	0.09667	ADI04495.1	0.45382
BAH67280.1	0.19756	BAH67552.1	0.29911	ZP_06283260.1	0.13321
BAH67798.1	0.16768	BAH67393.1	0.04281	BAH67392.1	0.04858
BAH67132.1	0.12932	BAH67135.1	0.04952	BAH67023.1	0.10239
BAH67659.1	0.13803	BAH66953.1	0.16383	ACZ54369.1	0.00661
ACZ54368.1	0.18675	BAH67633.1	0.19233	ADC68484.1	0.22743
BAH68100.1	0.12151	BAH67995.1	0.00221	BAH67996.1	0.02442
ACZ54287.1	0.02861	BAH67713.1	1.40E-04	BAH67709.1	0.00313
BAH67868.1	0.08028	BAH68101.1	0.07709	BAH67997.1	0.10714
BAH68099.1	0.06441	BAH68074.1	0.02244	BAH67828.1	1.40E-04
BAH67851.1	0.00307	BAH68016.1	0.05789	BAH67867.1	0.13261
BAH67829.1	0.05456	BAH68075.1	0.01794	BAH68015.1	0.07857
BAH67710.1	0.02562	ACZ54288.1	0.05577	BAH67558.1	0.17487
BAH67556.1	0.17161	BAH67559.1	0.16979	BAH68282.1	0.20023
ZP_04604644.1	0.24364	BAH67345.1	0.1747	BAH67971.1	0.13035
ACI24635.1	0.12113	BAH67344.1	0.01659	BAH67989.1	0.01234
BAH67620.1	0.00305	BAH67581.1	0.00311	BAH67626.1	0.00306
BAH67604.1	0.00306	BAH67562.1	0	BAH67507.1	0
BAH67555.1	0.10828	BAH68283.1	0.15576	BAH67554.1	0.12189
BAH67488.1	0.10224	BAH68027.1	0.12361	BAH67487.1	0.20434
ADC68496.1	0.18859	ZP_06241125.1	0.2632	BAH67293.1	0.14628
BAH67660.1	0.1349	CAI30442.1	0.15508	CAQ52623.1	0.12159
ACZ54361.1	0.09086	ACZ54360.1	0.06041	BAE93725.1	0.00331
BAH67352.1	0.00887	BAH67351.1	0.01597	BAH67355.1	0.00632
ACZ54356.1	0.19313	ADC68476.1	1.40E-04	ADC68479.1	0.00558
ADC68478.1	1.40E-04	ACZ54357.1	0.01933	BAH67354.1	0.01317
ZP_06275818.1	0.12088	BAH68030.1	1.40E-04	BAH68014.1	0.00908
BAH67862.1	0.00951	BAH67937.1	0.00301	BAH68041.1	0.00301
BAH68060.1	0	BAH67986.1	0	ABM47021.1	0.14955
BAH68278.1	0.10935	BAH68277.1	0.08216	BAH68245.1	0.22004
ABM47024.1	0.16857	BAH67739.1	0.13709	BAH67788.1	0.14921
ZP_05511736.1	0.04664	BAH67284.1	0.0365	ABM47020.1	0.1065
BAH67226.1	0.00802	BAH67439.1	0.04408	BAH67434.1	0.00384
BAH68066.1	0.07047	BAH66950.1	0.03202	BAH67103.1	0.0032
BAH67199.1	0.00913	BAH67108.1	0.15218	BAH67371.1	1.40E-04
BAH67198.1	0.00302	BAH67162.1	0.02019	BAH66985.1	0.01738
ZP_05517726.1	0.03871	BAH68133.1	0.08591	ZP_05000634.1	0.0615
ZP_05517715.1	0.02378	BAH66984.1	0.01611	BAH67055.1	0.01789
BAH67668.1	0.16173	ZP_06568065.1	0.11836	ZP_06568063.1	1.20E-04
AAP40326.1	1.40E-04	ACZ54302.1	0.03924	ACZ54301.1	1.40E-04
ACZ54300.1	0.01857	ACZ54337.1	0.12881	BAH67890.1	0.12676

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BAH66943.1	0.01506	BAH67384.1	0.05164	BAH66944.1	0.11714
BAH67076.1	0.05625	ZP_05805744.1	0.06956	ZP_04711973.1	0.12744
ZP_04711972.1	0.0142	ZP_04696780.1	0.00373	ZP_04696777.1	0
ZP_04711969.1	0	BAI44061.1	0.12382	ZP_05514810.1	0.13004
BAH67892.1	0.24285	BAH67733.1	0.14344	BAH67191.1	0.14295
BAH67533.1	0.15624	BAH67184.1	0.1392	BAH67531.1	0.11439
BAH67535.1	0.00328	BAH67627.1	0.00666	BAH67616.1	0.00667
BAH67571.1	0.00999	BAH67593.1	0.00333	BAH67563.1	1.40E-04
BAH67582.1	0.01007	BAH67585.1	0.00334	BAH67606.1	0.00666
BAH67601.1	0.13825	BAH67177.1	0.15338	BAH68243.1	0.09215
ACI24637.1	0.20806	BAH67179.1	0.10584	ACX31704.1	0.0053
ACX31705.1	0.02186	ACR61388.1	0.14234	ACR61389.1	0.1066
BAH67711.1	1.40E-04	BAH67545.1	0.02737	BAH67708.1	0.01798
BAH67712.1	0.03434	BAH67854.1	0.0103	ZP_05519868.1	1.60E-04
ACO94470.1	0.03563	ACO94498.1	0.00986	BAH67859.1	0.01674
ZP_05519869.1	0.01697	BAH67193.1	0.14807	BAH67523.1	0.12723
BAH67600.1	0.17526	BAH67189.1	0.03173	BAH67190.1	0.02447
BAH67188.1	0.04651	BAH67187.1	0.00602	BAH67186.1	0.02436
ADI05102.1	0.22233	BAH67178.1	0.10816	BAH67180.1	0.09432
BAH67181.1	0.10082	ZP_05519865.1	0.08236	ACO94472.1	0.04939
ACO94500.1	0.06387	BAH67270.1	0.1168	BAH67367.1	0.03497
BAH67825.1	0.00335	BAH67835.1	0.01021	BAH67755.1	0
BAH67832.1	0	BAH67303.1	0.085	BAH68033.1	0.06067
BAH67580.1	0.13557	BAH67419.1	0.17319	ZP_05519576.1	0.04803
ACZ54333.1	0.05059	BAH67667.1	0.15253	YP_001827586.1	0
ZP_06283310.1	0	BAH67374.1	0.14297	BAH67114.1	0.1015
ZP_06399907.1	0	ZP_06217032.1	0	ZP_06217036.1	0
ZP_06399909.1	0	BAH67234.1	0.02184	BAH67004.1	0.00953
BAH66980.1	0.14241	BAH67336.1	0.09916	BAH67435.1	0.06446
BAH67810.1	0.15771	BAH67307.1	0.01383	BAH67278.1	0.01401
BAH67373.1	0.01288	BAH67202.1	0.01545	BAH67111.1	0.06622
BAH67113.1	0.04753	BAH67515.1	0.12172	BAH67514.1	0.05791
BAH67811.1	0.2258	YP_003100462.1	0.14593	ACZ54307.1	0.10727
ZP_06283316.1	0.23366	ZP_06221319.1	0.11112	ZP_06221323.1	0.14898
ZP_06397556.1	1.50E-04	ZP_06220309.1	0.00804	BAH67339.1	0.13719
BAH67910.1	0.15209	BAH67657.1	0.12559	BAH67791.1	0.17149
BAH67792.1	0.00916	BAH67927.1	0.00305	BAH67773.1	0.01106
BAH67793.1	0.02136	BAH67340.1	0.00154	BAH68276.1	0.17219
BAH66978.1	0.17919	BAH67653.1	0.08416	BAH67654.1	0.0968
ADC68446.1	0.01758	ADC68449.1	0.01121	ADC68448.1	1.40E-04
ADC68447.1	0.00559	ACZ54340.1	0.00635	BAH68102.1	0.02132
ACZ54343.1	0.02474	ACZ54339.1	1.50E-04	BAH67685.1	0.02374
ACZ54344.1	1.60E-04	ACB37742.1	0.11165	ACB46486.1	0.10572

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BAH67686.1	0.01531	ACZ54341.1	0.01514	ACZ54342.1	1.60E-04
ACB37743.1	0.09392	ACB46485.1	0.06589	BAH67687.1	0.18094
BAH67935.1	0.10738	BAH67947.1	0.12423	BAH67944.1	0.03929
BAH67943.1	0.00516	BAH67934.1	0.00112	ADC68425.1	0.03622
ADC68511.1	0.04647	ZP_05520477.1	0.04763	BAH68130.1	0.0381
AAZ77697.1	0.17018	ACZ54362.1	0.09262	BAH67732.1	0.1839
BAH68162.1	0.15352	BAH68224.1	0.11665	BAH67548.1	0.0736
BAH67576.1	0.05257	ZP_06527468.1	0	ZP_05522637.1	0
BAH67197.1	1.40E-04	BAH67730.1	0.07562	BAH67731.1	0.07589
ZP_05529710.1	0.08456	BAH67748.1	0.10163	BAH67624.1	0.02134
BAH68160.1	0.06097	BAH67577.1	0.02187	BAH67578.1	0.01541
BAH67579.1	1.40E-04	BAH67196.1	0.0396	BAH67547.1	0.08386
ZP_05533194.1	0.16134	BAH67716.1	0.05414	BAH68211.1	0.00988
BAH68186.1	0.00315	BAH68199.1	0.0062	BAH68202.1	0.00308
BAH68182.1	1.20E-04	ZP_05522636.1	0.11783	BAH68184.1	0.01371
BAH67328.1	0.029	BAH67297.1	0.00661	ZP_05533191.1	0.13438
BAH67544.1	0.22019	ACI24630.1	0.00481	ACI24629.1	1.40E-04
BAH67164.1	0.05068	BAH67666.1	0.00311	BAH67690.1	0.00308
BAH67675.1	0	BAH67671.1	0	ZP_05519320.1	0.08001
ADI03793.1	0.00673	ADC68509.1	0.01621	ZP_04700415.1	0.24395
ZP_05512304.1	0.11715	BAI44056.1	0.23605	ZP_05512324.1	1.50E-04
ZP_05512303.1	0.04798	BAH57739.1	0.05014	BAH68039.1	0.05074
BAH67417.1	0.02219	BAH67102.1	0.05246	BAH67423.1	0.07736
BAH67446.1	0.05338	BAH67827.1	0.0064	BAH68310.1	0.00326
BAH67719.1	1.40E-04	BAH67838.1	0.00324	BAH67240.1	0.00325
BAH67842.1	1.40E-04	BAH67239.1	0.00647	BAH67824.1	1.40E-04
BAH67447.1	0.05093	BAH67405.1	0.01315	BAH67007.1	0.00663
BAH67479.1	0.03162	BAH67477.1	0.06304	BAH67402.1	0.08488
BAH67484.1	0.0751	BAH66981.1	0.04044	BAH67302.1	0.05538
BAH67923.1	1.40E-04	BAH67813.1	0.00337	BAH67485.1	0.05278
BAH67999.1	0.1465	BAH68226.1	0.06275	BAH67873.1	0.01233
BAH68175.1	0.00328	BAH68192.1	0.00997	BAH67878.1	0.00333
BAH68225.1	0.0101	BAH68214.1	1.40E-04	BAH68194.1	0.01095
BAH67696.1	0.00756	BAH67877.1	0.01241	BAH68223.1	0.03071
BAH68240.1	0.0203	BAH68242.1	1.50E-04	BAH68190.1	0.01321
BAH67876.1	1.50E-04	BAH68238.1	0.00662	BAH68232.1	0.03011
BAH67763.1	0.00657	BAH67750.1	0.0034	BAH68241.1	0.02444
BAH67881.1	0.00665	BAH67871.1	1.00E-04	BAH68087.1	0.11823
BAH68035.1	0.06759	BAH67276.1	0.08291	BAH68290.1	0.17816
ACZ54349.1	0.03788	ACZ54350.1	0.09171	ABB73268.1	0.26579
BAH67453.1	0.11258	ACZ54332.1	0.10276	BAH68143.1	0.0332
BAH66969.1	0.04616	BAH67703.1	0.05585	BAH66991.1	0.02306
BAH67089.1	0.01296	BAH67994.1	0.01371	BAH67863.1	0.00536



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BAH67898.1	0.01333	BAI44043.1	1.40E-04	BAH67707.1	0.01331
BAH66970.1	0.05844	BAI44062.1	1.40E-04	BAI44040.1	1.60E-04
BAH67429.1	0.05804	BAH67428.1	0.05823	BAH68056.1	0.01792
BAH67433.1	0.06012	BAH68019.1	0.02986	BAH67431.1	0.0822
BAH68021.1	0.04911	BAH68020.1	0.07725	BAH68233.1	0.37383
BAH67506.1	0.19308	BAH67789.1	0.1487	BAH67287.1	1.50E-04
ZP_05511729.1	0.01214	AAZ77699.1	0.18763	BAH67550.1	0.03308
BAH67551.1	0.08398	CAE02602.1	0.0756	CAO85893.1	0.04159
YP_001104838.1	0.22338	BAH67625.1	0.01821	BAH67329.1	0.01836
BAH67613.1	0.00942	ZP_05534726.1	1.60E-04	ZP_06711004.1	0.21738
AAM54077.1	0.00585	YP_003100936.1	0.00522	ZP_06711001.1	0.18689
ADC45516.1	1.60E-04	ADI03829.1	0.00275	ZP_06920512.1	0.0731
BAH67752.1	1.40E-04	BAH68200.1	0.00981	BAH67880.1	1.60E-04
BAH68204.1	0.00954	ZP_06776450.1	0.11375	ADI05000.1	0.08651
BAH68063.1	0.06434	BAH67203.1	0.05737	BAH67362.1	0.05912
BAH67683.1	0.00952	BAH67634.1	1.40E-04	BAH67672.1	0.00318
BAH67527.1	0.13628	BAH67727.1	0.06118	BAH67802.1	0
BAH67799.1	0	BAH68261.1	0.03983	BAH67432.1	0.07722
BAH67364.1	0.04723	BAH67679.1	0.01537	BAH67768.1	0.0099
BAH67692.1	0.01336	BAH67052.1	0.01561	BAH67194.1	0.23349
ZP_04996078.1	0.05604	BAH67759.1	0.05902	BAH67900.1	0.01308
ZP_04690561.1	0.02159	BAH68088.1	0.10732	BAH67970.1	0.00626
BAH67950.1	1.40E-04	BAH67955.1	0.0094	BAH67981.1	1.50E-04
BAH67974.1	1.50E-04	BAH68252.1	0.01249	BAI44047.1	0.30479
BAC57029.1	0.11864	AAS79460.1	0.01924	AAM81585.1	0.02062
AAB66505.1	0.15129	ABY21539.1	0.08212	ZP_05514811.1	0.14043
ADI04661.1	0.11852	BAH67317.1	0.03928	BAH67319.1	0.08481
BAH67318.1	0.18795	BAH67316.1	0.08221	BAH67473.1	0.18658
BAH67246.1	0	BAH67241.1	0	BAH67259.1	1.40E-04
ZP_06235298.1	0.29073	BAH67945.1	0.14118	BAH68279.1	0.12636
ZP_01913541.1	0.30396	ZP_01908136.1	0.33758	ZP_01913515.1	0.19774
BAG69048.1	0.00507	ACY71545.1	0.01682	ABD17635.1	0.00476
ABD17636.1	0.0046	BAG69064.1	0.07815	ABD17634.1	0.00466
ABD17632.1	0.00468	ABD17633.1	0.00949	BAG69070.1	0.01907
ABD17631.1	0.00932	XP_001401108.1	0.37157	XP_001224327.1	0.32332
AAR90278.1	0.20405	XP_002850891.1	0.08335	EFE33484.1	0.00798
EFE40145.1	0.01339	ACC99566.1	0.4726	ADD65233.1	0.39947
ZP_01460689.1	0.51493	YP_905920.1	0.00276	YP_001850071.1	1.50E-04
ZP_04748260.1	0.05312	NP_301233.1	0.05988	AAA25369.1	0.00277
NP_856610.1	1.60E-04	ZP_05773750.1	0.00278	ZP_06510991.1	0
ZP_03421493.1	0	ZP_03417096.1	0	NP_217456.1	0
ZP_03538042.1	0	ZP_03429805.1	0	ZP_03533490.1	0
ZP_04746570.1	0.14423	YP_001850648.1	0.1474	ACZ54285.1	0.30354

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YP_001289786.1	0.0028	ZP_03423003.1	0	ZP_06431007.1	0
ZP_03418061.1	0	ZP_06507734.1	0	YP_979967.1	0
ZP_05143388.1	0	ZP_03538997.1	0	ZP_04926640.1	0
ZP_03422420.1	0	NP_218342.1	0	ZP_06435170.1	0
ZP_05762226.1	0	ZP_05766367.1	0	ZP_03434924.1	0
ZP_03430724.1	1.10E-04	ZP_06515336.1	1.40E-04	ZP_06512992.1	1.60E-04
ZP_05763952.1	0	ZP_03419997.1	0	ZP_02551617.1	0
ZP_04980446.1	0	ZP_03532043.1	0	ZP_03536514.1	0
ZP_03432477.1	0	ZP_04925083.1	0.00207	ZP_05772304.1	1.40E-04
ZP_06454438.1	1.40E-04	NP_855206.1	0	ZP_06521068.1	0
ZP_06436882.1	0	ZP_06509472.1	0	ZP_06432725.1	0
NP_216043.1	0	ZP_06504661.1	0	YP_001850644.1	0.06471
ZP_04746561.1	0.05759	ZP_05224676.1	0.03919	NP_960801.1	0.01519
ZP_05216557.1	0	YP_881572.1	0	YP_640282.1	0
YP_001071400.1	0	ZP_03427981.1	0	ZP_06509101.1	0
ZP_03424405.1	0	ZP_06454067.1	1.40E-04	ZP_05771924.1	0
ZP_02550291.1	0	ZP_06444241.1	0	NP_335661.1	0
NP_854867.1	0	YP_001282491.1	0	ZP_03419617.1	0
ZP_05763587.1	0	NP_215696.1	0	ZP_06504303.1	0
ZP_06436514.1	0	YP_977335.1	0	ZP_04924775.1	0
NP_301890.1	0.07008	ZP_06851669.1	0.04822	ZP_05223768.1	0.05453
NP_961538.1	1.40E-04	ZP_05215712.1	1.40E-04	YP_880565.1	0.00303
YP_888986.1	0.18379	NP_962698.1	0.16655	YP_001703879.1	0.30273
YP_480103.1	0.56428	YP_713201.1	0.09619	YP_711540.1	0.2069
YP_001507667.1	0.09652	ZP_05512101.1	0.15729	ACZ54325.1	0.23305
ZP_04996400.1	0.15262	YP_905926.1	0	YP_001850077.1	0
NP_302533.1	0	AAA17364.1	0	ZP_04748269.1	0.04864
NP_856604.1	0.00266	ZP_05221781.1	0.00263	ZP_06451350.1	0
ZP_05765427.1	0	ZP_03433949.1	0	YP_003030979.1	0
ZP_05142454.1	0	ZP_03429799.1	0	ZP_06522490.1	0
NP_217450.1	0	ZP_03417090.1	0	ZP_02552328.1	0
ZP_03426296.1	1.40E-04	ZP_06510982.1	0.00437	ZP_05769561.1	1.40E-04
ZP_04981615.1	0.00999	ZP_06434236.1	1.40E-04	YP_001134655.1	0.08733
YP_953932.1	0.04987	YP_002504165.1	0.00272	AAA17356.1	0
NP_302535.1	0	YP_001850079.1	1.60E-04	YP_905928.1	0.00534
ZP_04748271.1	0.03051	YP_001288875.1	0	ZP_03433947.1	0
ZP_03426295.1	0	NP_856602.1	0	NP_217448.1	0
YP_979038.1	0	ZP_06799667.1	0	ZP_03538032.1	0
ZP_05765425.1	0	ZP_02549040.1	0.00275	YP_905927.1	0.0026
YP_001850078.1	1.50E-04	ZP_04748270.1	0.04296	ZP_03533482.1	0
NP_337516.1	0	ZP_02549019.1	0	ZP_05769560.1	0
ZP_03433948.1	0	YP_003030980.1	0	ZP_05221780.1	0
NP_217449.1	0	ZP_06510981.1	0	NP_302534.1	0.04872

### KS3 Group 3A

ACZ54286.1	0.03751	YP_953933.1	0.03937	YP_001134656.1	0.04941
YP_639996.1	0.08948	YP_639997.1	1.50E-04	YP_001071135.1	0.00274
BAG69131.1	0.31205	ZP_02381135.1	0.41929	AAW84210.1	0.39373
ABG20979.1	0.29265	AAX44144.1	0.21381	ABG20983.1	0.25869
ZP_06852108.1	0.25921	ABQ50543.1	0.11246	ADF36711.1	0.08513
YP_951844.1	0.13844	ABG20991.1	0.13723	ZP_06852107.1	0.05228
ABK01382.1	0.35229				

KS3 Group 3B

Sequence	Distance	Sequence	Distance	Sequence	Distance
AAW84225.1	0.13217	AAW84224.1	0.17288	AAW84199.1	0.30753
ABK01357.1	0.09957	ABK01364.1	0.00484	ABK01352.1	0.01443
ABK01370.1	0.10491	ABK01381.1	0.05168	AAW84184.1	0.02175
AAW84201.1	0.05067	AAW84206.1	0.08822	ABK01355.1	0.00715
ABK01354.1	0.07703	ABK01356.2	1.50E-04	AAW84230.1	0.11618
AAW84190.1	0.03998	AAW84204.1	0.10778	ABK01369.1	1.40E-04
ABK01360.2	1.30E-04	ABK01400.2	1.40E-04	ABK01363.1	1.40E-04
ABK01365.1	1.40E-04	ABK01358.2	1.10E-04	ABK01361.2	1.60E-04
ABK01372.1	1.40E-04	AAW84185.1	0.08091	ABK01336.1	0.07902
ABK01337.1	0.07411	AAW84179.1	0.10483	AAW84181.1	0.06783
ABK01329.1	0.01005	AAW84219.1	0.10573	AAW84231.1	0.13336
AAW84227.1	0.09574	ABK01396.1	0.18604	ABK01374.1	0.10043
AAW84189.1	0.01385	ABK01377.1	0.0141	ABK01326.1	0.03334
ABK01340.1	0.0224	ABB73279.1	0.05783	ABK01335.1	1.50E-04
ABK01345.1	0.0737	ABK01338.1	0.04764	ABK01347.1	0.00477
ABB73281.1	0.07161	ABK01349.1	0.03183	AAW62333.1	0.02751
ABB73277.1	0.01301	ABK01348.1	0.01559	AAQ91805.1	0.02836
ABB73280.1	0.06168	AAQ91804.1	0.03884	ABB73276.1	0.01328
AAW84182.1	0.01322	ABK01331.1	0.01989	ABK01334.1	0.09771
AAW84183.1	0.06134	ABK01342.1	0.12627	ABB73274.1	0.03442
ABK01397.1	0.03079	ABB73273.1	0.04795	ABK01346.1	0.03261
AAQ91806.1	1.40E-04	AAQ91807.1	0.01379	ABK01339.1	0.00908
AAW84193.1	1.40E-04	ABK01343.1	0.11558	AAQ91803.1	0.08974
ABK01327.1	0.10181	ABK01341.1	0.04663	ABK01328.1	0.03701
ABK01344.1	0.03368	ABB73275.1	0.0081	AAQ91802.1	0.01643
ABB73278.1	0.04856	ABK01332.1	0.11529	AAW84205.1	0.18594
ABK01376.1	0.15774	ABK01373.1	0.02902	ABK01368.1	1.40E-04
ABK01359.1	1.40E-04	ABK01367.1	0.00458	ABK01350.1	0.00243
ABK01351.2	0.0046	ABK01378.1	0.06532	AAW84223.1	0.03837
AAW62332.1	0.13219	ABK01375.1	0.01009	AAW84202.1	0.01352
AAW84212.1	0.16061	AAW84213.1	0.13051	AAW84215.1	0.21762
AAW62308.1	0.01745	AAW62309.1	0.10005	AAW84229.1	0.10245
ABK01330.1	0.09102	AAQ91799.1	0.14651	AAW84188.1	0.10734
AAW84214.1	0.19498	AAW84218.1	0.18602	ABK01398.2	1.40E-04
ABK01371.1	0.00521	AAW84228.1	0.14243	AAW84180.1	0.16415
AAW84226.1	0.16879	AAW84200.1	0.15003	ZP_01466498.1	0
AAF19814.1	0	BAG68986.1	0.1767	CAD89777.1	0.07187
AAW03329.1	1.40E-04	BAG69016.1	0.01004	ACN13116.1	0.69661
YP_002907572.1	0.33836	YP_632475.1	0.10073	tpeCAQ34917.1	1.40E-04
ZP_01462889.1	0.003	CAQ18835.1	0.37827	ZP_01462900.1	0.10596
YP_632473.1	0.08372	ZP_01466833.1	0.00286	tpeCAQ34929.1	1.40E-04
YP_632472.1	0.07752	BAG68974.1	0.03414	tpeCAQ34920.1	1.40E-04

KS3 Group 3B

ZP_01462897.1	1.60E-04	ACF54730.1	0.40715	AAW84191.1	0.36235
ZP_05529764.1	0.71383	ADE08307.1	0.25066	CAQ18828.1	0.26172
YP_003265632.1	0.39934	YP_003265633.1	0.34546	ZP_01463113.1	0.3045
BAG69089.1	0.00499	ACY71541.1	0.00512	ACY71555.1	0.01504
BAG69074.1	1.50E-04	ABD17627.1	0.00891	ABD17626.1	0.01335
ABD17625.1	1.40E-04	BAG69071.1	0.00586	ACY71565.1	0.35666
ACY71579.1	0.13644	CAJ46690.1	0.15541	AAF26923.1	1.50E-04
AAF62885.1	0	ABB92695.1	0	ADB12493.1	1.40E-04
ACB46197.1	0.00843	ACY71558.1	0.31455	YP_003267375.1	0.15741
CAO98848.1	0	ZP_01463123.1	0	BAG68976.1	0.28175
ZP_01467546.1	0.14699	ZP_01466715.1	0.06804	ZP_01466717.1	0.10796
ACY71583.1	0.24803	ACY71578.1	0.14144	ABD17630.1	0.02045
ACY71543.1	0.044	ACY71537.1	0.01504	ABD17628.1	0.06052
ABD17629.1	0.05844	CAD19092.1	0.26406	ADE08274.1	0.34869
AAAX44135.1	0.21666	YP_003138776.1	0.00257	YP_002373163.1	1.50E-04
ZP_01728761.1	0.03986	AAW55368.1	0.03425	AAW55369.1	1.40E-04
AAW55370.1	0.00467	YP_003138777.1	0.01074	YP_002373162.1	1.40E-04
ZP_01728762.1	0.12765	AAW55374.1	0.12095	ADD65246.1	0.19209
ACC99579.1	0.14024	ADF36703.1	0.14047	AAW84187.1	0.39697
ACY71570.1	0.29415	ZP_02383046.1	0.46745	BAG69118.1	0.39655
YP_442886.1	0	ZP_02388623.1	0	ABP57747.1	0.06238
ZP_02468489.1	0.02467	AAW84178.1	0.28609	YP_003267377.1	0.07838
CAO98850.1	1.40E-04	ZP_01466426.1	0.0027	BAG68999.1	0.59727
AAW84220.1	0.28802	ABI34078.1	0.00469	ABP68564.1	1.50E-04
CAO82981.1	0.05675	AAW84177.1	0.16211	YP_552077.1	0.4261
YP_778113.1	0.25354	ZP_02885974.1	0.0849	YP_778100.1	0.01076
ZP_02905098.1	0.014	ACV42478.1	0	AAT70108.1	0
YP_723339.1	0.18164	AAT70106.1	0.13492	ACF24471.1	0.01899
CAO90355.1	1.50E-04	AAW84186.1	0.05275	AAW84196.1	0.09659
YP_324486.1	0.19671	AAW55383.1	0.00465	AAW55384.1	1.60E-04
NP_486719.1	0.03639	AAW55381.1	1.40E-04	AAW55382.1	0.00476
AAW55380.1	1.40E-04	ZP_01628023.1	0.0139	AAAX44105.1	0.00705
AAW55378.1	0.01853	YP_001804492.1	0.01983	AAW55379.1	0.01397
ZP_00514739.1	1.40E-04	YP_001865644.1	0.00514	AAW55385.1	0.00457
YP_002912100.1	0.4336	ACD39169.1	0	AAQ90174.1	0
YP_002440182.1	0	YP_259895.1	0.1533	ABO15888.1	0.17189
ABO15860.1	0.07651	ZP_02382308.1	0.71654	CAM34285.1	0.36779
AAW84169.1	0.29651	ACR33077.1	0.26174	YP_001415915.1	0.48989
ABK01389.1	0.54981	YP_003073814.1	0.26294	YP_610927.1	0.56079
AAO39781.1	0.08393	ACF54739.1	0.01458	ACF54740.1	0.00521
YP_003656369.1	0.65487	ABK01388.1	0.34893	ADF88277.1	1.40E-04
AAF76933.1	1.50E-04	ADF88260.1	1.40E-04	ABX60163.1	0
ZP_06307803.1	0	ABU49633.1	1.40E-04	AAM33470.1	1.50E-04

### KS3 Group 3B

ABU49631.1	1.40E-04	BAG69050.1	0.18384	ACY71547.1	0.10991
YP_001983456.1	0.43396	AAW84211.1	0.31865	ACC99582.1	0.18407
AAO39786.1	0.38094	AAO39778.1	0.03786	ACR33078.1	1.50E-04
AAAX44137.1	0.04203	YP_001866731.1	0.29008	YP_001865643.1	1.50E-04
AAW55375.1	0.0095	AAS98782.1	0.24511	AAT70104.1	0.03773
AAT70107.1	0.09049	ADF36710.1	0.24614	YP_001866572.1	0.00934
AAW55376.1	0.01801	CAQ18830.1	0.32585	CAD19091.1	0.25229
YP_001866573.1	0.01293	AAW55377.1	0.01136	BAG68985.1	0.09529
ABA29782.1	1.60E-04	BAG69005.1	1.40E-04	YP_632694.1	0.07687
AAK57186.1	0.00781	BAG69025.1	1.50E-04	YP_001866571.1	0.29825
ABQ50541.1	0.2868	ZP_06307815.1	0.0054	ADF88276.1	1.60E-04
BAG69035.1	0.2061	CAD19093.1	0.22112	CAD19088.1	0.2895
CAD89776.1	0.06868	AAW03328.1	1.60E-04	BAG69006.1	0.00495
BAG68969.1	0.07633	BAG69026.1	0.01961	AAF19813.1	1.60E-04
ACY71580.1	0.28701	ACC99563.1	0.3321	tpeCAQ34928.1	0
ZP_01466838.1	0	YP_632467.1	0.06819	ZP_01466422.1	0.42874
YP_001818848.1	0.4129	YP_001866730.1	0.25324	YP_001865642.1	0.22278
ABG20992.1	0.28044	YP_001865641.1	0.30288	AAW55366.1	0.16303
AAW55365.1	0.17425	AAW55363.1	1.40E-04	YP_001866564.1	0.00823
AAW55364.1	0.01882	AAAX44145.1	0.29017	AAT70105.1	0.03994
AAS98783.1	0.04084	AAW84197.1	0.34985	YP_001657795.1	0.12579
AAAX44127.1	1.40E-04	AAAX44125.1	1.40E-04	YP_325237.1	0.00461
NP_485688.1	0.01009	CAD19087.1	0.26817	AAW55367.1	0.2424
ADE08284.1	0.3236	ZP_02381210.1	0.30296	AAW84216.1	0.21343
AAAX44138.1	0.08763	ABX60162.1	0	ZP_06307805.1	0
ADF88280.1	0.00529	ZP_06307814.1	0.00729	ADF88275.1	0.00679
ACR33079.1	0.39124	YP_003073812.1	0.45111	ZP_05036253.1	0.44022
AAW84175.1	0.176	ZP_01628022.1	0.08983	NP_486720.1	0.02809
YP_001804493.1	0.03947	ZP_00514740.1	1.60E-04	AAW55373.1	0.0046
AAW55372.1	1.40E-04	AAW55371.1	0.00464	ACC99577.1	0.3154
YP_001544628.1	0.25094	YP_003266192.1	0.31804	YP_632575.1	0.14195
ZP_05037594.1	0.30869	AAW55388.1	0.00461	AAW55386.1	1.40E-04
ZP_05029386.1	0.01061	AAW55387.1	1.40E-04	AAAX44130.1	0.24789
AAW55389.1	0.17712	YP_324603.1	0.01416	AAAX44126.1	0.00407
ACC99575.1	0.34261	ACC99561.1	0.30677	AAW84168.1	0.13963
AAW84172.1	0.18734	ZP_01731311.1	0.23451	YP_001805175.1	0.19234
YP_002378014.1	0.18594	CAQ48259.1	0.20076	ZP_01728763.1	0.2089
YP_002373161.1	0.13373	AAAY42396.1	0.21894	AAW55392.1	1.40E-04
AAW55391.1	0.00458	BAF68998.1	0.38901	AAW55390.1	0.00445
YP_001866729.1	1.60E-04	AAU93832.1	0.08716	AAU93833.1	0.12069
AAO39788.1	0.07884	YP_001734428.1	0.29831	YP_002377174.1	0.08628
AAAX44107.1	0.08439	ZP_03153601.1	0.10765	ZP_01088963.1	0.09901
AAAX44122.1	0.17109	CAM34324.1	0.37302	YP_434162.1	0.18123

KS3 Group 3B

ACC99586.1	0.08137	ACC99565.1	0.02452	ACC99583.1	0.04242
NP_924890.1	0.29337	CAM34283.1	1.40E-04	CAM34282.1	0.0046
YP_001657794.1	0.15234	NP_485689.1	0.01472	YP_325234.1	0.00794
NP_925775.1	0.20267	NP_924900.1	0.21584	CAX84229.1	0.33548
CAM34265.1	0.27216	ACI32874.1	0.29184	YP_001546719.1	0.339
ABG20990.1	0.30032	ADF57390.1	0.25523	ADF57407.1	0.30947
YP_003540039.1	0	YP_003529806.1	0	ADF57393.1	0.2748
ADE08316.1	0.05988	ADD65226.1	0.05053	ADD65259.1	0.01071
ADE08343.1	0.00311	ADD65281.1	0.00483	ADD65264.1	1.40E-04
YP_001546720.1	0.31951	ABG20977.1	0.29495	CAQ43078.1	0.22599
ADF57401.1	0.48548	CAD19089.1	0.33933	YP_003265638.1	0.43601
ACY71582.1	0.26452	YP_003265646.1	0.41617	CAQ18833.1	0.28018
ADF57406.1	0.23649	CAD19090.1	0.37514	CAQ43076.1	0.32151
BAG68987.1	0.02917	BAG68997.1	0.00795	BAG69033.1	0.00536
BAG68994.1	1.40E-04	BAG69018.1	0.00536	ACY71573.1	0.10295
BAG69008.1	0.04019	AAK57189.1	0.03759	YP_632697.1	0.05454
BAG69027.1	0.04844	BAG69004.1	0.02017	CAQ43079.1	0.44006
CAD19086.1	0.28215	ADD65221.1	0.24759	ACI32875.1	0.37887
YP_001818844.1	0.2365	ACC99585.1	0.34553	CAQ16325.1	0.28942
NP_522202.1	0.03549	YP_002254772.1	1.20E-04	YP_002257475.1	0.00268
ABH08747.1	0.02882	ABG20980.1	0.00435	ZP_02381208.1	0.06681
ZP_02907842.1	0.00623	ZP_02890743.1	1.50E-04	YP_778356.1	0.00886
ADD65218.1	0.22019	BAG69128.1	0.28353	ZP_06191939.1	0.53994
ACM47955.1	0.46285	BAG84248.1	0.17199	NP_630013.1	1.50E-04
ZP_06527946.1	0	ZP_05523113.1	0	ABG20985.1	0.64118
ZP_02371248.1	0.00264	ZP_02385145.1	1.50E-04	YP_729393.1	0.50878
ACC99580.1	0.36256	NP_630898.1	0.0413	ACZ54358.1	0.03734
ACZ54359.1	0.0336	ABK63806.2	0.60607	YP_001509636.1	0.53979
BAI44064.1	0.14874	YP_003509955.1	0.20833	NP_822424.1	0.05565
ACN13115.1	0.15134	YP_001415916.1	0.4552	YP_001544644.1	0.28296
YP_001545180.1	0.31987	ABG20994.1	1.40E-04	ABH08749.1	1.40E-04
CAO82989.1	0.01426	CAO82984.1	0.00395	ZP_04748540.1	0.23475
ADE08324.1	0.0104	ADF57404.1	0.11127	ADE08306.1	0.00964
ADD65287.1	0.00948	ADE08325.1	1.40E-04	ADD65235.1	0.00479
ADD65244.1	0.01934	ADD65232.1	0.00472	ADD65230.1	1.40E-04
ADE08334.1	0.00957	ADD65228.1	1.40E-04	ADE08282.1	0.00472
ADD65289.1	0.01563	ADD65297.1	0.01439	ADE08321.1	0.00476
ADD65262.1	0.00473	ADD65273.1	1.40E-04	ADE08315.1	1.50E-04
ADE08294.1	1.60E-04	ADD65300.1	0.01912	ADE08270.1	0.01942
ADE08329.1	0.01913	ADD65239.1	1.40E-04	ADE08276.1	1.40E-04
ADD65268.1	0.00964	ADD65277.1	0.00478	ADE08327.1	0.00965
ADD65240.1	1.40E-04	ADE08299.1	0.00966	ADD65252.1	0.00483
ADD65249.1	0.00484	ADD65217.1	1.40E-04	ADD65291.1	0.00482

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ADD65279.1	1.40E-04	ADE08308.1	0.00963	ADE08277.1	0.00959
ADD65243.1	1.40E-04	ADD65253.1	1.40E-04	ADD65302.1	0.00966
ADD65256.1	0.00478	ADE08275.1	0.01939	ADD65250.1	0.00964
ADD65216.1	0.00481	ADD65242.1	1.40E-04	ADD65254.1	0.00979
ADD65248.1	0.00954	ADE08305.1	0.02427	ADE08292.1	0.00967
ADE08271.1	1.60E-04	ADE08296.1	1.40E-04	ADD65224.1	1.40E-04
ADD65305.1	0.00964	ADD65303.1	1.40E-04	ADD65263.1	0.0097
ADE08283.1	1.60E-04	ADD65299.1	0.01447	ADE08289.1	0.02413
ADD65278.1	0.00962	ADD65285.1	0.00963	ADD65257.1	0.00477
ADE08279.1	0.00479	ADD65237.1	0.00478	ADD65245.1	1.40E-04
ADD65241.1	0.00477	ADD65227.1	1.40E-04	ADE08268.1	1.40E-04
ADD65258.1	0.01921	ADE08281.1	1.60E-04	ADD65304.1	0.00953
ADD65267.1	0.01439	ADE08301.1	0.00476	ADD65214.1	0.00483
ADE08287.1	0.01444	ADD65212.1	0.03394	ADE08313.1	1.60E-04
ADE08335.1	0.01431	ADE08317.1	0.02429	ADD65223.1	0.02895
ADE08288.1	1.60E-04	ADE08304.1	0.00479	ADE08297.1	0.00961
ADD65290.1	0.01464	ADD65222.1	0.01458	ADD65234.1	0.00464
ADD65260.1	0.00961	ADD65284.1	1.60E-04	ADD65219.1	0.01926
ADE08312.1	0.01914	ADD65213.1	0.0148	CAQ43075.1	0.34821
CAG25974.1	0.39068	AAW55398.1	1.40E-04	NP_924887.1	0.05292
AAW55397.1	0.00479	AAX44108.1	1.40E-04	AAX44110.1	0.00463
AAW55395.1	0.00466	AAW55396.1	0.00444	AAX44142.1	0.07995
AAW55394.1	1.50E-04	AAW55393.1	0.0095	AAX44131.1	0.00448
AAW55403.1	1.40E-04	AAW55402.1	1.40E-04	AAX44132.1	1.40E-04
ZP_05034942.1	0.10448	AAW55408.1	0.16253	AAW55407.1	0.00958
AAW55406.1	0.00481	AAW55404.1	1.40E-04	ZP_01462080.1	0.17661
YP_002483591.1	0.45385	AAS98777.1	0.19667	YP_632476.1	0.16487
tpeCAQ34916.1	1.40E-04	ZP_01462893.1	0.00286	BAG69117.1	0.04861
BAG69113.1	0.11249	AAO39790.1	0.2949	ADD65251.1	0.25753
ADD65225.1	1.60E-04	ADD65301.1	0.00473	AAX44120.1	1.40E-04
AAX44123.1	0.00444	ACF54734.1	0.41922	ZP_00944386.1	0.51176
NP_870253.1	0.55354	AAO62582.1	0.04308	ZP_01629641.1	1.50E-04
AAO64407.1	0.00269	CAD29794.1	0.00536	CAQ48242.1	1.50E-04
YP_001658875.1	0.00441	ACJ71240.1	1.50E-04	CAO90229.1	0
AAF00958.1	0	BAB12211.1	0.00273	ACJ71241.1	1.40E-04
AAG10057.1	0.16187	ACH86093.1	0.01031	YP_388101.1	0.43403
CAO90356.1	0.25897	AAT70103.1	0.41222	ACC99569.1	0.2331
BAG69036.1	0.20475	ADF57397.1	0.37456	ACC99574.1	0.14704
ACC99572.1	0.19958	ACC99568.1	0.1717	CAQ43077.1	0.37266
BAG69007.1	0.0184	AAK57188.1	0.01711	YP_632696.1	0.06863
BAG68998.1	0.27829	YP_003073813.1	0.38111	ADF57384.1	0.44141
YP_002754258.1	0.27447	ZP_02381158.1	0.15219	AAW84209.1	0.30649
BAG69029.1	0.34323	YP_003267373.1	0.09549	CAO98847.1	0



KS3 Group 3B

ZP_01463114.1	0	BAD38875.1	0.31065	ABB73269.1	0.14412
ZP_06890509.1	0.08656	BAG68977.1	0.32174	BAG69020.1	0.33444
ADB12488.1	0.00601	ACB46192.1	0.00537	AAF62880.1	0
ABB92690.1	0	AAF26919.1	0.01081	ACY71576.1	0.29232
AAW84174.1	0.45549	YP_003073810.1	0.36305	CAM34284.1	0.46391
ZP_04622165.1	0.49576	ZP_04700332.1	0.63317	YP_777801.1	0.02139
ZP_02383264.1	0.04329	ABK01392.1	0.43058	ABK01384.1	0.52836
ZP_06185949.1	0.51124	CAQ16327.1	0.48001	ZP_01879699.1	0.74479
ACF54733.1	0.56414	ADI03644.1	0.37642	ZP_05480792.1	0.41466
YP_777802.1	0.02574	ZP_02381479.1	0.03709	YP_777804.1	0.03949
ZP_02381338.1	0.02647	CAM34266.1	0.00944	CAM34267.1	0.01035
AAW84176.1	0.19266	AAT70096.1	0.32506	BAI44055.1	0.14137
ACZ54327.1	0.2702	ZP_05109046.1	0.59531	ABI36818.1	0.27629
ZP_06415899.1	0.31706	ZP_06890219.1	0.18248	AAX39746.1	0.90869
ADF57391.1	0.32846	ABP73645.1	0	YP_001157876.1	0
ZP_01465307.1	0.27457	CAQ64686.1	0.2759	AAQ74418.1	0.45074
ZP_06847132.1	0.14938	ZP_05225900.1	0.11882	ZP_05217071.1	1.60E-04
YP_882291.1	0.00927	ZP_05764089.1	0	NP_855344.1	0
ZP_06517152.1	1.40E-04	ZP_03424906.1	0	NP_216180.1	0
ZP_03432603.1	1.40E-04	ZP_04925187.1	0.00313	ZP_04748782.1	0.12416
YP_001850778.1	1.40E-04	YP_905621.1	0.02215	ZP_06473902.1	0.25284
ZP_04604284.1	0.24824	AAP85336.1	0.28989	ZP_05511703.1	0.26689
ZP_06710998.1	0.23337	ZP_05511588.1	0.58654	ZP_01997310.1	0.76021
YP_003300365.1	0.49529	YP_001106335.1	0.2768	ADB23402.1	0.27845
BAG69065.1	0.2961	BAG69034.1	0.16147	YP_003267379.1	0.1453
ZP_01467322.1	1.40E-04	CAO98852.1	1.60E-04	AAK57190.1	0.07309
YP_632698.1	1.40E-04	BAG68961.1	1.60E-04	ACY71574.1	0.01
ABD17671.1	1.40E-04	ABD17669.1	0.01403	ABD17670.1	0.01853
BAG69087.1	0.00479	BAG69072.1	1.40E-04	ABD17667.1	0.00478
ACY71564.1	0.009	ABD17668.1	0.01841	CAQ18838.1	0.27107
BAG69078.1	0.18	BAG69104.1	0.00514	BAG69101.1	0.02432
BAG69116.1	0.05884	BAG69123.1	0.04267	CAD19085.1	0.17784
YP_001104830.1	0.26121	ABD17663.1	1.50E-04	ABD17664.1	0.02302
ABD17662.1	0.00406	ABD17665.1	0.02809	ADE08285.1	1.40E-04
ADE08341.1	0.00963	ACY71539.1	0.11475	BAG69043.1	0.01619
ABD17660.1	0.01407	ABD17661.1	1.20E-04	ADF57408.1	0.26256
ADD65293.1	0.1097	BAG68978.1	0.16208	BAG69010.1	0.21069
NP_851482.1	0.79787	ACI24633.1	0.2584	ACY71569.1	0.02975
BAG69060.1	1.50E-04	ABK32287.1	1.40E-04	ABK32255.1	0.00675
ADE08311.1	0.21705	ABK01385.1	0.20069	YP_003540038.1	0
YP_003529807.1	0	YP_003263387.1	0.27992	ABG20996.1	0.1604
XP_002399422.1	0.29849	YP_748191.1	0.14729	NP_841435.1	0.10717
ADD65276.1	0.00931	ADD65280.1	1.60E-04	YP_001898724.1	0.14148

KS3 Group 3B

ZP_03267586.1	0.09632	ZP_02356869.1	0	ZP_02363963.1	0
ZP_02464609.1	0.01059	ZP_02387461.1	0	ZP_05586320.1	0
YP_441888.1	1.40E-04	ZP_04966561.1	0.00281	ZP_02491295.1	0
YP_001060246.1	0	YP_991888.1	0	ZP_04901289.1	0
YP_103851.1	0	ZP_01767186.1	0	YP_002898088.1	0
YP_001067508.1	0	YP_109384.1	0	ZP_02373605.1	0.01614
ZP_04898137.1	1.40E-04	YP_334656.1	0.00265	ZP_02404262.1	0.00281
ZP_02457099.1	0	ZP_03789792.1	0	ZP_02412772.1	0
ZP_03451875.1	0	ZP_02909420.1	0.01874	YP_368116.1	0.00799
ZP_04939550.1	0.00266	YP_001764051.1	0.00538	YP_834428.1	0
YP_620184.1	0	YP_002232331.1	1.50E-04	YP_002910562.1	0.09069
AAX62304.1	0.6073	YP_001951777.1	0.22037	CAG25973.1	0.2387
NP_885141.1	0.00536	NP_889454.1	1.60E-04	YP_001630922.1	0.10913
YP_001580781.1	0.11171	AAX51692.1	0.02503	AAX44143.1	1.40E-04
AAX44141.1	0.00434	YP_001269229.1	0.20503	ACN67520.1	0.12558
ZP_05293228.1	0.24225	YP_002221018.1	0.13644	CAM34325.1	1.60E-04
CAM34326.1	0.00475	CAM34290.1	0.01919	YP_001753645.1	0.08491
ZP_00050081.2	0.01257	YP_002962940.1	1.40E-04	YP_003068227.1	0.00276
YP_001639417.1	0	YP_002420998.1	0	YP_001924536.1	1.40E-04
ABD17673.1	0.02762	YP_002497237.1	0.04629	YP_001767322.1	0.01608
YP_001832244.1	0.20999	YP_002363007.1	0.17358	YP_001522952.1	0.21192
YP_001418687.1	0.2881	AAX62365.1	0.00737	AAX62366.1	0.05111
AAX62367.1	0.04158	ZP_01014394.1	0.01379	ABN49886.1	0.02926
CAM17816.1	0.3293	ZP_06867920.1	0.30095	ADD65215.1	0.35492
ZP_01547720.1	0.00246	AAX86994.1	1.50E-04	ACR55656.1	1.50E-04
ACR55659.1	1.40E-04	YP_002551155.1	0.1611	YP_001325891.1	0.01254
CAA45483.1	0.02434	NP_384683.1	1.40E-04	YP_002824762.1	0.00836
AAW78650.1	1.60E-04	ABK01380.1	0.13992	AAX62374.1	0.14175
AAX62360.1	0.04943	AAX62358.1	0.05837	AAX62371.1	0.00925
AAX62370.1	0.17074	AAX62372.1	0.00557	AAX62369.1	0.043
AAX62349.1	1.40E-04	AAX62343.1	0.03222	AAX62338.1	0.14057
AAX62362.1	0.02438	AAX62337.1	0.20028	AAX62354.1	1.40E-04
AAX62347.1	0.00937	AAX62341.1	0.00463	AAX62344.1	0.00932
AAX62319.1	0.014	AAX62346.1	0.00586	AAX62357.1	0.00925
AAX62353.1	1.40E-04	AAX62373.1	0.00468	AAX62340.1	0.03676
AAX62361.1	0.00801	AAX62352.1	0.00457	AAX62359.1	0.00952
ACI32870.1	0.01495	AAX62364.1	0.00202	AAX62368.1	0.0046
AAX62351.1	0.44913	ACI32869.1	0.01415	AAX62356.1	0.02632
AAX62355.1	0.01775	AAX62342.1	0.05396	AAX62348.1	0.01908
ZP_05086284.1	0.07163	ZP_06896005.1	0.38542	YP_002275047.1	0
YP_001602640.1	0	ZP_04755506.1	1.50E-04	YP_001677871.1	0.0081
ZP_04683656.1	0	ZP_06574405.1	0	ACX31703.1	0.36387
ZP_05511872.1	0.28985	ADI13133.1	0.2467	CAJ87979.1	0.07078

### KS3 Group 3B

ZP_06575977.1	1.40E-04	ZP_04685211.1	0.0027	AAW84194.1	0.25056
AAX62315.1	0.26534	ZP_06187358.1	0.37862	ABK01333.1	0.20583
ABI34077.1	0.16584				

KS3 Group 3C

Sequence	Distance	Sequence	Distance	Sequence	Distance
ACH88367.1	0.0184	ACH88370.1	9.90E-04	XP_974066.1	0
EFA02059.1	0	XP_002741902.1	0.0388	XP_002742027.1	0.02335
XP_002738672.1	0.04025	XP_002737768.1	0.01012	XP_002118336.1	0.03813
XP_002118338.1	0.02	XP_002118339.1	0.12161	XP_002116740.1	0.0103
XP_002116738.1	0.01651	XP_001923643.1	0.04572	CAF94659.1	0.06092
ACZ55138.1	0.05176	spP36189.1	0.06711	NP_990486.1	0.00859
spP12276.5	0.0032	XP_001370508.1	0	XP_001370481.1	0
NP_032014.3	0	EDL34809.1	0	EDL34808.1	0
BAE42492.1	0	BAE27771.1	0	AAA41145.1	0.00288
CAA31780.1	1.40E-04	spP12785.3	0	NP_059028.1	0
XP_001113076.1	0.02645	AAH63242.1	0	BAE06070.1	0
pdb3HHDA	0	AAS09886.1	0	NP_004095.4	0
AAA73576.1	0	EAW89745.1	0	AAC50259.1	0.02948
XP_511758.2	0	XP_001167297.1	0	XP_001491342.1	0.05504
XP_540497.2	0.06468	NP_001012687.1	0.03565	ABB36643.1	0.00293
ABI95140.2	0.00292	AAX51683.1	0.24329	AAO19448.1	1.40E-04
AAX55638.1	1.40E-04	pdb2VZ8A	0	NP_001093400.1	0
XP_002124749.1	0.42981	XP_001898484.1	0.10418	XP_002639688.1	0.02403
NP_492417.2	0.05361	XP_001945449.1	0.05628	XP_001942583.1	0.0168
XP_001949630.1	0.68896	XP_319941.4	0.03074	XP_001658180.1	0.05381
XP_001847047.1	0.12239	ACJ13230.1	0	NP_608748.1	0
NP_001137778.1	0	XP_002077984.1	1.20E-04	XP_001968521.1	0.00289
XP_002087781.1	1.40E-04	XP_002052427.1	0.00887	XP_002002897.1	0.01474
XP_001988068.1	0.04473	XP_001356821.2	0	XP_002015181.1	0
XP_002074274.1	0.03323	XP_001962523.1	0.01185	XP_002052428.1	0.02369
XP_002074271.1	0.08123	XP_002074273.1	1.50E-04	XP_002015184.1	0
XP_001356822.2	0	XP_002077982.1	0.00302	XP_002087780.1	0.0057
XP_001968520.1	1.40E-04	NP_647613.1	0.00282	XP_001962524.1	0.0172
XP_001988067.1	0.06508	XP_002002898.1	0.01682	XP_396268.2	0.15117
XP_001605059.1	0.10582	XP_002432036.1	0.13556	XP_970417.2	0
EFA11365.1	0	XP_001945287.1	0.09118	XP_001945190.1	0.09564
XP_002434035.1	0.12841	XP_002408797.1	0.05252	XP_002403523.1	0.08576
XP_002403503.1	1.50E-04	XP_971525.1	0.31451	XP_970599.1	0.41275
XP_970448.2	1.40E-04	EFA05203.1	1.40E-04	EFA05248.1	0
XP_971466.1	0	XP_970384.2	1.40E-04	EFA05204.1	1.60E-04
XP_395426.3	0.29336	XP_002429689.1	0.23965	XP_001949072.1	0.19347
XP_001605700.1	0.19859	NP_001037478.1	0.15342	NP_001037476.1	0.70632
XP_002423718.1	0.81776	XP_969531.1	0.89948	XP_001942950.1	0.81275
XP_001944600.1	0.55852	XP_001944653.1	0.53966	XP_001943289.1	0.32681
XP_001951965.1	0.17346	XP_001607838.1	0.22919	XP_001607841.1	0.48805
XP_001603340.1	0.33659	XP_001659008.1	0.01055	XP_321166.4	0.05991
XP_001849863.1	0.04277	XP_001997043.1	0.00379	XP_001993620.1	0.00683

### KS3 Group 3C

XP_001997822.1	0.02556	XP_002019333.1	0.00419	XP_002137899.1	1.40E-04
XP_002073880.1	0.01429	NP_001015405.2	0.06182	XP_001999184.1	0.0394
XP_002054315.1	0.0221	XP_001654967.1	0.27282	XP_001654966.1	0.01512
XP_001654965.1	0.00396	XP_001845134.1	0.07674	XP_001654963.1	0.23903
XP_316979.4	0.29536	XP_001845135.1	0.21821	XP_002670671.1	0.72758
ACB47226.1	0.28185	XP_001629012.1	0.00468	XP_001623604.1	0.01467
XP_001632720.1	0.05523	XP_001622503.1	0.05107	XP_002369050.1	0.00391
EEE21624.1	1.40E-04	CAM34280.1	0.86834	YP_003485578.1	0.57154
BAD38873.1	0.32207	ZP_06890218.1	0.237	ZP_06415898.1	0.16756
XP_001375980.1	0.20826	XP_418587.2	0.01787	XP_418588.2	0.02086
XP_002190558.1	0.00473	XP_002189754.1	0.0058	CAG05482.1	0.15401
CAG05481.1	0.78455	XP_682975.3	0.1868	NP_001041530.1	0.00269
CAI21194.1	1.50E-04	XP_002589799.1	0.21775	XP_002599684.1	0.13918
XP_002591573.1	0.24754	XP_002734101.1	0.42303	XP_001731756.1	0.81388
XP_001874773.1	0.56729	XP_002469775.1	0.3848	XP_002391757.1	0.23991
XP_002472355.1	0.2282				

### KS3 Group 3D

Sequence	Distance	Sequence	Distance	Sequence	Distance
XP_645909.1	0.28141	EFA85171.1	1.43E-01	EFA78203.1	0.12412
EFA82680.1	0.23353	EFA77399.1	0.02035	EFA77422.1	0.01696
EFA82790.1	0.06749	EFA75922.1	0.03218	EFA82534.1	0.00014
EFA82529.1	0.00274	EFA75463.1	0.30423	EFA86658.1	0.21046
EFA83735.1	0.24809	XP_643790.1	0.04613	XP_643784.1	0.00014
EFA83876.1	0.14424	EFA82771.1	0.01185	EFA82769.1	0.01617
XP_628867.1	0.02851	XP_628865.1	0.00148	XP_638811.1	0.00668
XP_638813.1	0.01323	XP_646104.1	0.17947	XP_635303.1	0.05501
XP_635304.1	0.04819	XP_646445.1	0.28197	XP_637425.1	0.03672
XP_637427.1	5.10E-02	XP_645557.1	0.07179	XP_001733036.1	0.04293
XP_645569.1	0.0167	XP_001732962.1	0.02291	XP_001732963.1	0.02032
XP_629652.2	0.34703	XP_635742.1	0.02808	XP_001733033.1	0.02088
XP_635590.1	0.04362	XP_635575.2	0.02662	XP_635580.1	0.01909
XP_635490.1	0.00261	XP_635494.1	0.00014	XP_635588.1	0.02162
XP_635593.1	0.03573	XP_635589.1	0.02806	XP_001732967.1	0.38756
XP_644952.2	0.17999	XP_640701.1	0.18939	XP_644930.2	1.02E-01
XP_636757.1	3.01E-01	XP_644907.1	0.25049	XP_001733001.1	0.00016
XP_640415.1	0.01316				

KS3 Group 3E

Sequence	Distance	Sequence	Distance	Sequence	Distance
AAR92222.1	0.48837	AAR92221.1	0.39965	XP_002478229.1	0.41151
XP_002566266.1	0.21459	EFE36394.1	0.00557	EFE38442.1	1.50E-04
XP_001403832.1	0.11495	XP_965600.1	0.06054	CBI52337.1	0.01099
XP_001211072.1	0.01305	XP_001261656.1	1.40E-04	EER28768.1	0.01059
XP_002541850.1	0.24487	XP_001248627.1	0.03234	XP_002567447.1	0.25084
ADF28669.1	0.11223	XP_002488004.1	0.07144	XP_002482120.1	0.08704
ACZ57548.1	0.20632	XP_001219467.1	0.16028	XP_001389118.1	0.25515
XP_002152964.1	0.03274	XP_002480264.1	0.0146	ADF28670.1	0.17171
XP_001801515.1	0.50581	XP_001589519.1	0.36383	XP_001545612.1	0.00251
AAR90245.1	0.00892	XP_001799782.1	0.57301	XP_002483036.1	0.42155
XP_001388555.1	0.35955	XP_001821644.1	0.01667	XP_002379799.1	1.50E-04
XP_002485885.1	0.22944	XP_958169.1	0.09047	CAP65540.1	0.15144
XP_001215234.1	0.11418	XP_001228574.1	0.1162	XP_001905772.1	0.41233
XP_001397040.1	0.10888	XP_002560839.1	0.14185	XP_001805097.1	0.34385
XP_001942161.1	0.36826	XP_002487169.1	0.1803	XP_661216.1	0.36219
XP_001389116.1	0.11949	AAR90266.1	0.10965	ACB12550.1	0.02796
AAR92218.1	0	AAD43562.2	0	ABD72181.1	1.40E-04
XP_364800.2	0	XP_001521951.1	0	XP_001910647.1	0.15611
XP_001799912.1	0.16779	EEU34994.1	0.25057	XP_682179.1	0.43108
XP_002568526.1	0.50282	XP_664035.1	0.75014	XP_682274.1	0.07633
EFE33181.1	0.14442	XP_002842777.1	0.13603	XP_002557971.1	0.38651
XP_002376417.1	0.3038	XP_001816589.1	0.00281	XP_002383512.1	1.60E-04
XP_001395346.1	0.19089	XP_001258284.1	0.07523	XP_002567168.1	0.18242
XP_001825164.1	0.24415	XP_002381864.1	0.03018	XP_002844003.1	0.21576
XP_001390513.1	0.28662	XP_001393844.1	0.19403	XP_001258949.1	0.26182
XP_748574.1	0.00565	EDP53389.1	0.00568	XP_001393447.1	0.49299
XP_002372966.1	0.00545	XP_001817817.1	1.60E-04	XP_001217722.1	0.23202
EFE44178.1	0.12865	EFE34630.1	0.40373	XP_001400073.1	0.43468
XP_001391193.1	0.50682	XP_001904308.1	0.32323	XP_001827403.1	0.00277
XP_002384601.1	1.40E-04	XP_001274957.1	0.16981	XP_001215858.1	0.18107
XP_381966.1	0.21474	XP_001942300.1	0.15795	EFE41038.1	2.30E-04
EFE31625.1	0.00544	XP_001275051.1	0.00486	XP_001241816.1	0.07375
XP_001262991.1	1.50E-04	XP_754155.1	0.00285	EDP52288.1	1.40E-04
XP_001801326.1	0.14645	AAR90268.1	0.05904	EEH10010.1	0.02307
EER38848.1	0.03133	XP_001394543.1	0.14799	EEU36919.1	0.23049
EER36725.1	0.04854	XP_001588926.1	0.87203	EEH02664.1	0.01967
AAR90267.1	0.40792	XP_001904579.1	0.52354	EEU36061.1	0.2826
AAR92219.1	0.12781	EEU34613.1	0.13669	XP_749851.1	0.19424
XP_001219308.1	0.23487	XP_001216793.1	0.32796	AAR90269.1	0.45423
XP_001261668.1	0.04135	XP_747167.1	0.00253	EDP49172.1	1.40E-04
XP_001825712.1	0.33392	AAR90246.1	0	XP_001557060.1	0
XP_001595995.1	0.13333	XP_001806097.1	0.22305	CBI59288.1	0.22997

KS3 Group 3E

XP_664688.1	0.17197	XP_001265535.1	0.01166	XP_001213896.1	0.00437
ADF28668.2	0.12315	AAAY32931.1	0.27489	AAAY27746.1	0.0841
EEY23012.1	0.35803	XP_383516.1	0.03141	EEU48982.1	0.00534
AAR92220.1	0.00854	XP_001210368.1	0.22027	XP_001908855.1	0.21659
XP_001394029.1	0.09771	XP_002147654.1	0.3356	XP_001210999.1	0.19744
XP_002847685.1	0.01374	EFE33589.1	0.0027	EFE44717.1	0.0027
XP_001398521.1	0.02674	CAQ16344.1	0.01815	XP_001824383.1	0.00284
XP_002381496.1	0.00257	XP_664626.1	0.20348	EEY18883.1	0.33729
XP_002478535.1	0.21832	XP_001826816.1	0.00493	XP_002385245.1	1.50E-04
AAT92024.1	0.22088	XP_001271445.1	0.07933	XP_001262312.1	0.02476
EDP55391.1	0.00264	XP_751268.2	1.50E-04	XP_001401800.1	0.16001
AAS98203.1	0.30377	XP_001394930.1	0.14991	AAS98197.1	0.12682
XP_001218239.1	0.54615	XP_001822398.1	0.00265	XP_002382491.1	1.40E-04
XP_659388.1	0.36052	XP_001556768.1	0	AAR90240.1	0
XP_001585402.1	0.35431	AAR92215.1	0.21018	XP_001223282.1	0.11898
XP_001545728.1	0.6113	XP_002147272.1	0.14185	ACN22186.1	0.19363
XP_001912726.1	0.2198	XP_002149829.1	0.21306	XP_001396431.1	0.1716
AAX62321.1	0.238	XP_390640.1	0.00297	AAS57293.1	0.00285
XP_753141.2	0.10892	XP_001270376.1	0.06185	XP_001274946.1	0.18858
tpeCAG29113.1	1.40E-04	XP_001412451.1	0.11187	BAC20564.1	0.07735
ABA02239.1	0.03215	spQ0C8M3.2	0	XP_001209263.1	0
spQ9Y8A5.1	1.40E-04	XP_002486701.1	0.30447	tpeCAH59194.1	0.00305
XP_001415348.1	1.40E-04	CAC44633.1	0.03848	AAR92208.1	0.01759
XP_001221453.1	0.17833	XP_001269050.1	0.10328	XP_001228890.1	0.1152
AAR90241.1	0	XP_001546007.1	0	XP_002850361.1	0.01121
EFE30182.1	1.40E-04	EFE41543.1	1.40E-04	XP_001818832.1	0.00979
XP_002380257.1	1.60E-04	EFE40994.1	0	EFE33214.1	0
XP_002842735.1	0.02634	XP_001400817.1	0.26281	AAV66106.1	0.13729
AAR92216.1	0.22713	XP_002844742.1	1.32324	XP_002557403.1	0.08331
EDP53404.1	0.1473	XP_361336.2	0.33045	EEH16752.1	0
EEH50245.1	0	AAS98204.1	0.28201	XP_001392496.1	0.00719
XP_001270445.1	0.00313	XP_001934577.1	0.21799	XP_001905191.1	0.22288
XP_001904548.1	0.23945	XP_001798193.1	0.066	AAR90270.1	0.0645
XP_002153037.1	0.05934	XP_002483871.1	0.07311	EEY15220.1	0.23116
XP_002544298.1	0.07592	EER27752.1	1.40E-04	XP_001242733.1	0.00522
XP_001220460.1	0.47967	XP_001790998.1	0.4595	XP_002847329.1	0.25645
XP_001221381.1	0.31104	XP_002560003.1	0.1029	XP_001412418.1	1.40E-04
CAG28797.1	1.40E-04	CAG28798.1	0	XP_001412433.1	0
XP_001270543.1	0.10146	AAR90239.1	0	XP_001560667.1	0
XP_001399961.1	0.16454	XP_001394625.1	0.14725	AAR90242.1	0
CAP58786.1	0	XP_001545403.1	1.40E-04	AAR90271.1	0.23052
AAT28740.1	0	AAR92217.1	0	AAS57294.1	0.10528
ACS68554.1	0.13879	EEU43643.1	0.0616	XP_002561691.1	0.22471



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XP_001210411.1	0.24288	XP_001276488.1	0.01258	ABS87601.1	0
EDP49155.1	0	XP_747151.2	0	XP_367447.2	0.17341
XP_963238.1	0.01861	CBI55367.1	0.01435	XP_001228019.1	0.15692
XP_001904161.1	0.18613	XP_002486604.1	0.25341	AAS46233.1	0.22885
EEY18889.1	0.25222	XP_001818816.1	0	XP_002380243.1	0
XP_681681.1	0.02509	XP_001258701.1	0.03105	XP_002843368.1	0.10714
XP_002583532.1	0.09907	XP_001407793.1	1.60E-04	tpeCAH59193.2	1.40E-04
XP_001521895.1	0.52918	CAO91861.1	0.25795	XP_002148352.1	0.30348
CAL69597.1	0.23794	XP_002379959.2	0	EED51183.1	0
BAG82673.1	0.03784	CBI54140.1	0.23812	XP_002843704.1	0.03005
XP_001273596.1	0.02256	XP_001942484.1	0.34236	XP_002567442.1	0.21519
XP_001220242.1	0.46337	XP_658640.1	0.15059	XP_001225294.1	0.17029
XP_001216280.1	0.0679	XP_659639.1	0.27028	XP_664395.1	0.24713
XP_002846667.1	0.08369	EER25595.1	0	XP_001246128.1	0
XP_002379026.1	0.00271	XP_001823613.1	0.00261	XP_002567554.1	0.07007
XP_001227512.1	0.13847	AAR90258.1	0.39786	XP_001908964.1	0.04513
XP_001224361.1	0.0559	XP_959122.1	0.00831	CBI59477.1	0.02436
AAO62426.1	0.26073	XP_001273842.1	0.23377	XP_001393508.1	0.18452
BAC20566.1	0.09353	ABA02240.1	0.0723	XP_001209270.1	0.01951
AAD34559.1	0.0142	XP_002847170.1	0.33476	XP_002486631.1	0.18148
XP_001904919.1	0.21515	XP_001795280.1	0.3573	AAR90257.1	0.01391
ABB76806.1	1.50E-04	XP_001219267.1	0.1641	CBI53020.1	0.03607
XP_955938.1	0.0644	XP_001905278.1	0.08505	EEY20202.1	0.20635
EEU37129.1	0.17101	XP_001209753.1	0.18416	XP_001396381.1	0.26875
XP_002559294.1	1.50E-04	AAX62327.1	0.08953	XP_001824541.1	0.2542
XP_002794432.1	0.00784	EEH17875.1	1.60E-04	EEH46751.1	0.00538
XP_001597801.1	1.40E-04	EEY14055.1	0.77062	AAR90244.1	0.04303
XP_001801317.1	0.39519	XP_001226673.1	0.14172	XP_958135.2	0.03856
CBI53318.1	0.01302	XP_360215.2	0.22343	XP_361278.2	0.35479
XP_001395761.1	0.23421	XP_002567530.1	0.11154	XP_002151045.1	0.03538
XP_002342001.1	0.04238	BAD97694.1	0.39578	XP_001589724.1	0.29753
XP_001558952.1	0	AAR90238.1	0	XP_001597611.1	0.06991
EEU37200.1	0.29067	XP_661214.1	0	tpeCBF75781.1	0
XP_001936632.1	0.14009	XP_385970.1	0.00286	AAS57290.1	0.00259
XP_002151741.1	0.37241	EEU34973.1	0.24957	XP_001591652.1	0.36302
XP_001592682.1	0.32642	EEY15584.1	0.18574	XP_001410106.1	1.40E-04
XP_001522321.1	1.50E-04	EEU47356.1	0.01502	AAR92214.1	0.04471
AAS57292.1	1.40E-04	XP_388971.1	1.50E-04	XP_001904114.1	0.11464
XP_002843932.1	0.14026	XP_682486.1	0	tpeCBF82304.1	0
XP_002846808.1	0.05879	XP_002560737.1	0.13339	XP_001395352.1	0.08294
XP_001394423.1	0.07072	XP_001229617.1	0.42328	XP_001408070.1	0.11303
BAD83684.1	0.02997	AAR90261.1	0.03946	XP_001934477.1	0.04417
XP_001270321.1	0.3071	XP_002585309.1	0.26795	XP_001394579.1	0.12334

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XP_001209968.1	0.12035	AAR92213.1	0.41734	AA41231.1	0.38682
AAR90262.1	0.2359	XP_002482833.1	0.17094	XP_002485355.1	0.10981
ADA79525.1	0.11494	AAR85531.1	0.19067	AAB08104.3	0.11525
XP_001273762.1	0.0546	XP_001258783.1	0.01485	XP_748462.2	0
EDP53518.1	0	XP_001816573.1	1.40E-04	XP_002383534.1	1.40E-04
XP_001217710.1	0.36432	XP_002561451.1	0.11619	XP_001937136.1	0.34319
XP_002483869.1	0.02575	XP_002153035.1	0.07756	XP_001942160.1	1.0394
XP_001397313.1	0.17703	AAT92023.1	0.08971	XP_001404136.1	0.43992
XP_002558882.1	0.20488	AAR90260.1	0.25458	ABQ42548.1	0.15205
XP_002486489.1	0.24979	XP_001276282.1	0.04669	XP_001212624.1	0.01296
XP_001209965.1	0.07988	XP_001394581.1	0.15462	XP_002543416.1	0.07061
XP_001243573.1	0.00936	EER29760.1	0.00162	EEH04903.1	0.01379
EER44976.1	0.20688	XP_001543057.1	0.15175	EEQ83870.1	0.02849
XP_002622046.1	0.00669	XP_002795995.1	0.04616	EEH44268.1	0.00278
EEH19899.1	0.00271	XP_001394387.1	0.55695	XP_001595502.1	0.46216
XP_001402359.1	0.3473	XP_001547938.1	1.40E-04	AAR90237.1	1.40E-04
XP_001390395.1	0.21017	XP_001273186.1	0.05825	EDP53793.1	0
XP_749265.2	0	XP_001265690.1	0.00216	XP_001596140.1	0.40168
AAX62303.1	1.50E-04	AAX62363.1	0.00492	XP_001819018.1	0.05991
XP_002381999.1	1.50E-04	XP_001825065.1	0.25598	XP_001399183.1	0.30744
XP_001268490.1	0.25618	XP_001587412.1	0.27579	XP_001934016.1	0.23459
XP_001396949.1	0.32678	BAE80697.1	0.03469	AAR90264.1	0.0432
XP_001930443.1	0.03033	XP_001939440.1	0.1559	XP_002382732.1	0.20865
XP_002487607.1	0.18335	XP_001396752.1	0.21021	XP_002146288.1	0.31958
EEU41127.1	0.17985	XP_001407886.1	0.27498	AAR92209.1	0.02998
AAS57287.1	0.02034	XP_384870.1	0.00249	AAR90263.1	0.23658
XP_362812.2	0.23047	XP_001597598.1	0.30411	XP_002485662.1	0.49178
AAR92212.1	0.14229	EEY15605.1	0.04457	AAR90265.1	0.477
AA440862.1	0.17613	XP_368438.2	0.21122	XP_001558633.1	0.46604
XP_362330.2	0.3871	CBI52831.1	1.39972	XP_001589516.1	0.60008
XP_364744.2	0.78168	XP_002485500.1	0.28319	AAS57885.1	1.40E-04
XP_390724.1	0.0083	XP_002146115.1	0.28887	XP_362763.2	0.26549
ACM42406.1	0.0311	ACD39774.1	0.12373	XP_002376296.1	0.1469
XP_001934720.1	0.06437	ACD39758.1	0.16344	AAS57289.1	0.19155
ACD39767.1	0.07966	XP_002568274.1	0.1931	XP_382572.1	0
ABB90283.1	0	XP_002150998.1	0.32692	ACM42412.1	0.11388
XP_001225803.1	0.27875	XP_002488696.1	0.37122	XP_369011.2	0.46285
AAR90259.1	0.70997	XP_001223689.1	0.14552	XP_660151.1	0.15391
XP_001552860.1	0	AAR90247.1	0	XP_388384.1	0.04288
XP_002152245.1	0.03535	XP_002485809.1	0.01634		

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Sequence	Distance	Sequence	Distance	Sequence	Distance
BAG69100.1	0.32014	YP_003075651.1	0.6372	YP_003657636.1	0.12468
YP_001702947.1	0.10441	YP_119236.1	0.07021	YP_120537.1	0.11889
ZP_04747288.1	0.21536	YP_001104811.1	0.41481	ZP_01460630.1	0
CAG28678.1	0	YP_632255.1	0.07265	BAG68980.1	0.48275
YP_890975.1	0.36035	NP_349947.1	0.45863	ZP_04668456.1	0.42333
ZP_02380518.1	0.73958	ABG57047.1	1.40E-04	ACB71244.1	1.40E-04
YP_529192.1	0.16033	ACZ54324.1	1.50E-04	ACZ54291.1	0.00965
ABL86391.1	0.07689	ZP_06775082.1	0.07416	ACI24638.1	0.01241
ACI24628.1	0.05584	ACI24631.1	0.01635	ACI24640.1	1.40E-04
ZP_06279092.1	0	YP_001822326.1	0	ZP_04697681.1	0
ZP_04712879.1	0	ACW82529.1	0.022	ACZ54328.1	0.04275
ACN13117.1	0.00539	ZP_05802686.1	0.02949	ZP_06271740.1	0.03307
ZP_04706130.1	0.06061	ZP_05489284.1	0.01292	ZP_04994792.1	0.02172
YP_001537255.1	1.50E-04	ACZ54298.1	1.40E-04	YP_003040036.1	0.5188
YP_003190825.1	0.26267	CAM34287.1	0.38486	ACF54731.1	0.10095
ACF54737.1	0.15054	ZP_04622166.1	0.26993	ZP_04614380.1	0.15145
YP_610922.1	0.76695	BAA92854.1	0.61851	ZP_00517721.1	0.51986
ZP_05029233.1	0.27731	AAW55400.1	0.52623	ADD65306.1	0.00469
AAW55401.1	0.38813	YP_001415298.1	0.34876	ABP68562.1	0.31613
CAM17815.1	0.07684	ABI34079.1	0.12093	AAX62312.1	0.08007
ACV30045.1	0.52329	ABP68563.1	0.21923	CAM34288.1	0.00736
CAM34289.1	0.00631	NP_867299.1	0.16431	CAM17818.1	0.1445
AAW84208.1	0.11294	CAM34268.1	0.05742	CAM34269.1	0.00456
CAM34271.1	0.00911	CAM34272.1	0.00913	CAM34270.1	1.50E-04
ADF57410.1	0.11564	ADF57398.1	0.00753	ADF57402.1	0.00586
ZP_03127198.1	0.13892	ZP_02927635.1	0.09987	AAX62336.1	0.34311
AAX62302.1	0.03425	AAX62316.1	0.00175	EFA86495.1	0.24352
XP_635518.1	0.30875	XP_002610053.1	0.05899	XP_002598386.1	1.50E-04
XP_002598380.1	0.01376	XP_002589000.1	0.0027	XP_796777.2	0.2733
XP_002733151.1	0.17526	YP_001983652.1	0.40048	AAQ91800.1	0.28323
XP_002680948.1	0.77998	XP_001742454.1	0.78256	ZP_06385951.1	0.94393
AAX62334.1	0.63811	XP_793564.2	0.00574	tpgDAA05847.1	0.0361
XP_002608071.1	0.10622	XP_002605913.1	0.00452	XP_002605916.1	0.00739
XP_002610103.1	0.00349	XP_002610100.1	0.00766	ZP_04748543.1	0.08633
YP_001071136.1	1.40E-04	YP_639998.1	0.00276	NP_302536.1	0.07231
YP_001850080.1	0	YP_905929.1	0	ZP_04748272.1	0.03622
ZP_06518431.1	0.54988	ZP_06451347.1	0	ZP_03538031.1	0
NP_856601.1	0.00278	NP_337514.1	0	NP_217447.1	0
ZP_06434232.1	0	ZP_03417087.1	0	ZP_06522487.1	0
YP_001288874.1	0	ZP_03421485.1	0	ZP_06514423.1	0
YP_003030982.1	0	ZP_03426294.1	0	ZP_05773741.1	0
YP_001134659.1	0.1582	YP_953936.1	0.10251	YP_001134657.1	0.06494

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YP_953934.1	0.05074	ZP_05498240.1	0.10693	ZP_05498235.1	0.10056
ACJ83241.1	1.40E-04	NP_854075.1	1.60E-04	ZP_06431528.1	0
NP_214919.1	0	ZP_04979415.1	0	ZP_06448546.1	0
YP_001286355.1	0	ZP_06503479.1	0	ZP_03431243.1	0
ZP_06515851.1	0	ZP_05771044.1	0	NP_334828.1	0
ZP_05762744.1	0	AAW84195.1	0.25839	AAX62323.1	0.21419
AAX62318.1	0.02874	AAX62306.1	0.09433	AAX62331.1	0.53426
YP_001799554.1	0.17109	YP_249908.1	0.09175	NP_739315.1	0.04228
NP_602063.1	1.60E-04	AAO39780.1	0.01491	YP_001139681.1	1.50E-04
ZP_04835147.1	0	ZP_03711572.1	0	NP_940497.1	0.14106
ZP_03970768.1	1.60E-04	ZP_03919471.1	0.00518	ZP_03977828.1	0.21756
ZP_05708535.1	0.12388	ZP_06837668.1	0.1169	ZP_03935785.1	0.0845
YP_002835897.1	0.06573	ZP_03931949.1	0.05629	ZP_03919872.1	1.40E-04
ZP_05365264.1	0.0026	AAR89981.1	0.1066	CBB12338.1	0.05244
YP_002781135.1	0.01353	YP_704020.1	1.50E-04	ZP_06831405.1	0.10111
YP_002763668.1	1.50E-04	ZP_04386357.1	0.0053	AAO39783.1	0.01485
YP_116395.1	0.22219	YP_003645168.1	0.24607	YP_003271455.1	0.15855
YP_001700934.1	0.09265	YP_956411.1	0.03922	YP_001132439.1	0.06417
NP_301199.1	0.04359	ZP_03434899.1	0	ZP_04926618.1	0
NP_218317.1	0	ZP_03538967.1	0	ZP_05770496.1	0
NP_857467.1	0	YP_979941.1	0	ZP_03422974.1	0.00682
YP_001853623.1	0	YP_908332.1	0	ZP_04747234.1	0.01148
ZP_05227506.1	0.01362	ZP_05214792.1	0.0026	YP_879512.1	0
NP_959154.1	0	ZP_06849349.1	0.01764	YP_642170.1	0
YP_001073645.1	0	YP_890605.1	0.07161	YP_003660030.1	0.33998
YP_003102526.1	0.45071	ZP_06412919.1	0.32624	ZP_06238974.1	0.24571
ZP_05536241.1	0.04551	YP_003493390.1	0.08455	YP_003344192.1	0.20363
YP_003302314.1	0.09291	ACZ54281.1	0.11321	AAZ77673.1	0.16397
YP_001107644.1	0.28623	ABY83164.1	0.30936	AAM77986.1	0.12922
ACZ54292.1	0.01466	YP_001539688.1	1.50E-04	ACZ54299.1	1.40E-04
XP_002841993.1	0.30123	ABS11029.1	0	ACM48250.1	0
ABS11017.1	0.10179	ABS11028.1	0.03627	ABS11033.1	0.02441
ABS11032.1	0.04121	AAAY46446.1	0.21155	XP_001402408.1	0.0666
AAB49684.1	0.05088	XP_002560460.1	0.02668	XP_001791162.1	0.04477
CAB44720.1	0.12332	AAR90279.1	0.4423	AAS98200.1	0.26355
XP_002849666.1	0.07045	EFE34898.1	1.40E-04	EFE38467.1	0.00541
AAK48943.1	0.08355	XP_001273093.1	0.07365	spP22367.1	0.0369
CAA65133.1	0.03359	XP_002564832.1	0.02565	XP_001826575.1	0
XP_002385535.1	0	AAC23536.1	0.01922	AAP33839.2	0.25607
AAC49814.1	0	XP_001215453.1	0	BAA20102.2	0.00825
ABS11021.1	0.00973	ABS11025.1	1.40E-04	ABS11018.1	1.40E-04
ABQ11383.1	1.60E-04	ABS11019.1	1.40E-04	ABQ11384.1	1.40E-04
ACM48251.1	0	ABS11024.1	0	ABS11015.1	0.00482

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ABS11023.1	1.40E-04	ABS11031.1	0.01189	ABQ11382.1	0.11762
ABS11027.1	0.02485	ABQ11381.1	0.06603	ABS11016.1	0.02816
ABS11014.1	0.14563	AAX35547.1	0.14241	YP_640635.1	0.00281
YP_001071753.1	0.00274	YP_001133955.1	0.06419	YP_954639.1	0.04315
ZP_06914033.1	1.50E-04	ZP_06914030.1	1.40E-04	ABY66019.1	0.12481
ACN64831.1	0.13832	YP_001507916.1	0.30393	BAF92601.1	0.16705
BAI44052.1	0.24913	AAM70355.1	0.07669	YP_001536890.1	1.60E-04
ACZ54297.1	1.40E-04	ZP_04607387.1	0.1007	AAK83194.1	0.16257
ZP_06567199.1	1.40E-04	YP_001107472.1	1.60E-04	AAW84192.1	0.03742
ABK01401.1	0.10207	YP_003339919.1	0.57269	ZP_06889851.1	0.62794
YP_712779.1	0.67936	ZP_06720760.1	0.6629	ZP_06143605.1	0.50943
YP_001452456.1	0	ZP_04003365.1	0	NP_754350.1	0
NP_754345.1	0.62679	YP_002479916.1	0.62172	YP_003656370.1	0.57598
YP_002911534.1	0.08288	ZP_02909704.1	0.0528	YP_439431.1	0
ZP_05590816.1	0	ZP_02384633.1	0	ZP_02370748.1	0
ZP_02466489.1	0.00312	YP_001075600.1	0	ZP_02475135.1	0
ZP_04522344.1	1.40E-04	ZP_02406882.1	0.00263	YP_335297.1	0
ZP_04899863.1	0	ZP_02451459.1	0	ZP_02493788.1	0
YP_111185.1	0	ZP_02485627.1	0	ZP_02509869.1	0
ZP_02459636.1	0	ZP_02502034.1	0.00264	ZP_03450553.1	0
ZP_01770176.1	0	ZP_04967972.1	0	ZP_02415388.1	0.00262
ABG20986.1	0.50374	ZP_05886075.1	0.11043	CBJ57158.1	0
ZP_03832636.1	0	YP_003016164.1	0	ZP_03826219.1	0
ABK01394.1	0.45414	NP_085630.1	0.46249	YP_003485577.1	0.49832
AAX62314.1	0.00553	AAX62313.1	0.02949	AAX62310.1	0.02078
AAX62305.1	0.05556	AAX62311.1	0.01065	ACZ54370.1	0.51682
ADD65211.1	0.42454	ADF57388.1	0.31287	YP_632474.1	0.10781
ZP_01462895.1	0	tpeCAQ34918.1	0	BAG68973.1	0.08476
YP_434161.1	0.43629	YP_003075555.1	0.52683	ABK01386.1	0.34422
YP_001544631.1	0.56316	YP_388100.1	0.44868	ZP_03310384.1	0.46217
ADD65294.1	0.62267	NP_519931.1	0.30079	YP_532899.1	0.32194
YP_002152318.1	0	ZP_03841858.1	0	YP_275081.1	0.03682
ZP_03398050.1	0.00269	NP_792409.1	0.00273	ZP_03051890.1	0.00275
YP_003229840.1	1.40E-04	YP_002403254.1	0.00275	CAX65492.1	0.00275
ZP_06016652.1	0.00282	NP_993006.1	0.00275	BAI55371.1	0
NP_669707.1	0	YP_002412992.1	0	CAA73127.1	0
YP_002407087.1	0	YP_002398189.1	0	CAJ87591.1	0
YP_001006816.1	0	YP_669844.1	0	YP_001872138.1	0
CBG35040.1	0	ZP_04003393.1	0	ZP_04536450.1	0
ZP_03002039.1	0	YP_002920249.1	0	YP_070123.1	0
NP_754319.1	0	YP_001452495.1	0.00273	YP_541186.1	0
ADE90838.1	0	YP_002391749.1	0	ZP_05436225.1	0
YP_853076.1	0.00276	YP_997199.1	0.14836	YP_002257756.1	0.01364

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YP_002255089.1	1.40E-04	ZP_02467786.1	0.01354	ZP_02360283.1	0.00303
NP_929573.1	0.04719	YP_003041139.1	0.0204	CAJ76918.1	0.05107
ZP_05887133.1	0.04042	YP_129880.1	0.10499	ZP_06041432.1	0.10034
ZP_04915941.1	1.40E-04	ZP_04416158.1	0.00271	YP_003529804.1	0.63306
ABP57746.1	0.02975	ZP_05587364.1	0	ZP_02388624.1	0
YP_442887.1	1.40E-04	ZP_02467803.1	0.03024	ACZ54312.1	0.51118
YP_002479914.1	0.5267	NP_754360.1	0	YP_669878.1	0
YP_003468582.1	0.10565	YP_434619.1	0.03357	ZP_02327561.1	0.35798
ZP_04261626.1	0.00333	YP_001644643.1	0.00282	ZP_04105325.1	1.50E-04
ZP_04319872.1	0.0055	ZP_04204195.1	0	ZP_04072881.1	0
AAR87760.2	0	ZP_04085225.1	0.00275	ZP_04309324.1	0
ZP_03234200.1	0	ZP_02327689.1	0.35652	ZP_03054644.1	0.00269
YP_001485891.1	1.40E-04	ACH88380.1	0.00485	ACH88382.1	0.01362
ACH88379.1	0.00459	ACH88381.1	0.00464	NP_754362.1	0
YP_001452445.1	0	ZP_04534878.1	0	ZP_03031844.1	0
YP_541221.1	0	YP_669879.1	0	ZP_04003355.1	0.00272
YP_003073750.1	0.54424	YP_003468578.1	0.09384	YP_434615.1	0.04193
ZP_02327562.1	0.36471	ZP_02327690.1	0.45672	ZP_03054477.1	0.00256
YP_001485889.1	1.60E-04	ZP_01946777.1	0	YP_001424220.1	0
ZP_02219130.1	0	NP_819808.1	0	YP_001596910.1	0
YP_002303687.1	0.00265	ZP_06187070.1	0.17539	YP_127441.1	0.02952
YP_003619461.1	1.40E-04	YP_001250924.1	0.01084	YP_001157874.1	0.92998
YP_095955.1	1.50E-04	YP_003619246.1	0	YP_001250709.1	0
YP_127246.1	0.01598	YP_124234.1	0.00745	ZP_01892962.1	0.27844
ZP_01618157.1	0.19458	AAO39789.1	0.33634	CAO82988.1	0.01151
CAO82983.1	0.02942	ACB47224.1	0.44706	AAX44128.1	0.03403
YP_001869791.1	0.032	YP_325326.1	0.10495	YP_002945068.1	0.20586
YP_003643776.1	0.0078	CAZ89054.1	0.011	AAO39785.1	0.12988
YP_003391647.1	0.18225	CAO82990.1	0.21852	YP_003092301.1	0.23994
ZP_01882501.1	0.24081	ACR55655.1	0.17252	AAX51693.1	0.23834
ZP_02183268.1	0.17598	ACR55654.1	1.50E-04	ACR55653.1	0.00449
BAG69009.1	0.12643	YP_632181.1	1.60E-04	BAG68963.1	1.40E-04
BAG68972.1	0.03006	BAG68996.1	0.04853	YP_631822.1	1.60E-04
BAG68962.1	1.40E-04	BAG68971.1	0.08904	BAG68960.1	1.40E-04
YP_631961.1	1.40E-04	YP_002988663.1	0.52495	YP_434159.1	0.3843
ABK01391.1	0.44324	ZP_01728759.1	0.08659	YP_002373165.1	0.00448
YP_003138774.1	0.00121	YP_001520881.1	0.17654	AAW55348.1	0.00461
AAW55349.1	1.40E-04	YP_632586.1	0.4056	ZP_03127696.1	0.33003
CAG25975.1	0.08363	ABG20982.1	0.08325	ADE08295.1	0.17297
ABG20993.1	0.18148	ADF57394.1	0.0081	ADF57395.1	0.00912
ADF57386.1	0.00456	ZP_05375996.1	0.31281	ZP_03629653.1	0.20536
ZP_03626698.1	0.09878	CAM17817.1	0.45045	ABG20981.1	0.32736
ZP_03626294.1	0.16144	CAM17820.1	0.24443	YP_001831985.1	0.24446

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YP_001857900.1	0.3187	YP_675129.1	0.27436	ZP_06360031.1	0.04156
YP_001992735.1	0.00517	NP_948678.1	1.60E-04	YP_002361578.1	0.25753
ACH88363.1	1.40E-04	ACH88374.1	1.60E-04	ACH88371.1	0.00474
ACH88373.1	0.01419	ACH88376.1	0.01437	ACH88375.1	0.00472
ACH88372.1	1.40E-04	ACH88377.1	0.00462	ABD17657.1	0.3955
YP_001415918.1	0.31891	CAM34279.1	0.43004	ADF57389.1	1.40E-04
ADF57400.1	0.00468	BAG69068.1	0.59004	AAW84207.1	0.33281
CAQ18832.1	0.2741	ADF36683.1	0.44853	AAF26920.1	1.50E-04
ADB12490.1	1.40E-04	ACB46194.1	0.02503	AAF62882.1	0
ABB92692.1	0	AAF19812.1	0	ZP_01467099.1	0
AAW03327.1	0.07091	CAD89775.1	0.0524	ZP_06192961.1	0.51423
YP_001983457.1	0.41669	YP_953931.1	0.06016	YP_001134654.1	0.06236
YP_639995.1	0.00249	YP_001071132.1	1.50E-04	NP_302532.1	0.03637
ZP_04748268.1	0.01285	YP_001850076.1	1.40E-04	YP_905925.1	0.00508
ZP_03533484.1	0	NP_217451.1	0	NP_856605.1	0
ZP_02552327.1	0	ZP_05773745.1	0	ZP_03426299.1	1.40E-04
ACG63859.1	0	CAQ48282.1	0	AAW55352.1	0.00428
AAW55351.1	0.00432	AAW55350.1	1.40E-04	ACH88378.1	0.24743
ACH88366.1	0.02298	ACH88369.1	1.40E-04	ADF57383.1	0.29005
ZP_03629367.1	0.18084	YP_631015.1	0.23256	YP_759908.1	0.37141
ABG20988.1	0.03973	ZP_05113660.1	0.26134	YP_914644.1	0.24882
ZP_02153408.1	0.17035	ZP_00960961.1	0.20084	ZP_05741641.1	0.03601
YP_614394.1	0.00584	ZP_05088646.1	0.05199	ZP_02145704.1	1.60E-04
ZP_02149682.1	0.00409	AAX51696.1	0.01982	AAX51694.1	0.00479
YP_166102.1	0.1257	ZP_05080683.1	0.0769	ZP_01755301.1	0.09179
AAX51698.1	0.03809	ZP_01057778.1	0.02486	ZP_05842534.1	0.1208
ZP_05075614.1	0.15202	AAX51695.1	0.0506	ACH88368.1	0.0056
ACH88365.1	0.00854	ZP_01878022.1	1.40E-04	ZP_01035521.1	0.03599
ZP_01747999.1	0.09031	ZP_05783142.1	0.07664	ZP_01444322.1	1.50E-04
ACR55658.1	1.40E-04	ACR55657.1	1.60E-04	ZP_01740677.1	0.11066
AAX51697.1	0.07267	BAG69099.1	0.23498	ABG20989.1	0.22505
YP_631808.1	0.30397	ZP_01466419.1	0.20031	BAG69047.1	0.17285
YP_631817.1	0.1681	CAF05651.1	0.12082	ADH04682.1	0.08317
YP_631806.1	0.13948	BAG68988.1	0.0169	BAG68975.1	0.01683
YP_001546722.1	0.39372	ACC99581.1	0.38219	YP_003102583.1	0.21953
NP_822020.1	0.13616	CAQ18839.1	0.25395	ABG20984.1	0.26565
ACY71536.1	0.17266	ACY71561.1	0.0161	ACY71546.1	0.00484
BAG69044.1	0.00485	BAG69062.1	0.00477	ABD17655.1	1.40E-04
ACY71566.1	0.00484	ABD17652.1	0.01344	ABD17654.1	0.02269
ABD17653.1	0.0047	YP_003656372.1	0.42841	BAG68989.1	0.47989
ZP_03310383.1	0.42096	BAG69129.1	0.27347	ADF57392.1	0.34686
YP_001866557.1	0.32731	ACJ46059.3	0.05012	ZP_06307806.1	0
ADF88279.1	0	ADF88265.1	0	ADF88262.1	0

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AAM33468.1	0.01026	ABM21569.1	0.2799	AAO62585.1	0.0424
AAO64404.1	1.60E-04	ZP_01629644.1	0.00782	CAD29795.1	0.01045
CAQ48243.1	1.00E-04	YP_001658877.1	0.00522	BAB12213.1	0.01575
AAX73195.1	0.00261	AAF00957.1	0	CAO90231.1	0
AAN32979.1	0.20362	AAX44133.1	0.00395	AAX44134.1	1.40E-04
ZP_05037424.1	0.1841	AAW55353.1	0.25083	AAW84170.1	0.3043
YP_001804494.1	0.03627	ZP_00514742.1	0.06978	NP_486675.1	0.09142
ZP_01628055.1	0.06369	YP_002505320.1	0.31178	ACC99576.1	0.2467
YP_001804488.1	0.03583	ZP_00514736.1	0.06243	AAX44136.1	0.17232
AAW84221.1	0.1643	AAX44106.1	1.50E-04	AAW55355.1	0.00911
AAW55356.1	1.40E-04	NP_486686.1	0.06609	ZP_01628043.1	0.03328
AAW55358.1	0.00458	AAW55357.1	0.00939	AAX44139.1	1.40E-04
AAX44140.1	0.00449	ACC99578.1	0.41149	CAO82991.1	0.28789
ZP_05494799.1	0.02397	YP_002506646.1	0.01414	AAW55362.1	0.1883
AAW55361.1	0.00454	AAW55359.1	0.00457	AAW55360.1	1.40E-04
YP_001520883.1	0.29705	AAS98784.1	0.20635	YP_723338.1	0.22884
AAT70102.1	0.21778	ADA69241.1	0.13126	YP_322130.1	0.07113
AAF15892.2	0.0187	YP_001865726.1	0.01406	YP_001866469.1	0.25964
AAS98787.1	0.19522	ZP_01998719.1	0.30507	ZP_03631566.1	0.31858
CAO82979.1	0.00435	CAO82976.1	0.00922	ZP_05494800.1	0.05454
YP_002506647.1	0.0414	YP_001866784.1	0.1608	AAN28672.1	0.2742
ADF57385.1	0.32031	ADF36707.1	0.16419	ADF36705.1	0.00659
ADF36709.1	1.60E-04	ADF36706.1	0.00352	ADF36704.1	0.00868
YP_001866786.1	0.25501	YP_001866780.1	0.1405	YP_001869920.1	0.31002
AAX44113.1	0.00454	AAX44112.1	0.00454	AAX44117.1	0.00454
AAX44111.1	1.40E-04	AAX44119.1	0.00452	AAX44114.1	1.40E-04
YP_001866797.1	0.23408	YP_001866779.1	0.25159	AAW55354.1	0.24589
ACJ46057.1	0.18316	YP_001818849.1	0.2183	YP_001818852.1	0.27514
YP_481081.1	0.2012	ABS90478.1	0.16953	ABK60044.1	0.20017
ADI12780.1	0.21237	YP_001545184.1	0.3114	BAG68979.1	0.35683
BAG68995.1	0.07876	YP_631807.1	1.40E-04	BAG68964.1	0.00476
ZP_01466416.1	0.19031	YP_631818.1	0.1225	AAW84203.1	0.46727
ZP_00944388.1	0	YP_002258020.1	0	YP_001452454.1	0
NP_754352.1	0	ZP_03031592.1	0	ZP_05003233.1	0
ZP_06776184.1	0	YP_002907571.1	0.33446	ABD17656.1	0.06694
BAG69042.1	0.06212	YP_001618911.1	0.0728	ACY71557.1	0.06167
YP_003117665.1	0.56967	BAG69063.1	0.02486	ABD17658.1	0.01147
ABD17659.1	0.0158	ZP_01467455.1	0.32051	YP_442884.1	0
ZP_02388620.1	0	ZP_01459583.1	0.03175	BAG69028.1	0.04704
ADH04680.1	0.12109	CAF05649.1	0.08352	ABG20978.1	0.38028
ZP_06220289.1	1.60E-04	ZP_06396937.1	0.00264	YP_003338144.1	0.13264
ZP_04609112.1	0.04914	ZP_06219517.1	1.50E-04	ZP_06399928.1	0.00273
YP_001610982.1	0.20564	YP_001617472.1	0.0387	ACY71538.1	0.05154



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ZP_05803519.1	0.35053	ADI05329.1	0.27087	ADD65220.1	0.57848
BAG69093.1	0.30406	ABG20995.1	0.37959	ABY71212.1	0.00679
ABG57048.1	0.00735	ZP_06890383.1	0.23613	YP_412520.1	0.20567
YP_001565769.1	0.18614	YP_002945627.1	0.09462	YP_972053.1	0.00362
ZP_06212545.1	0.00731	YP_002539682.1	0.15459	NP_356936.2	0.17739
YP_002539689.1	0.26105	ZP_06500227.1	0.00815	YP_234791.1	1.40E-04
CAD70195.1	0.00266	NP_929148.1	0.02206	YP_003041510.1	0.01911
CAL80821.1	0.13851	ZP_02365874.1	0	ZP_02358834.1	0
ZP_03449976.1	0	YP_105690.1	0	YP_001024122.1	0
ZP_04522578.1	0	ZP_03793567.1	0	ZP_01770412.1	0
ZP_02407036.1	0	YP_335431.1	0	YP_001075743.1	0
ZP_02415539.1	0	YP_001062790.1	0	ZP_02493943.1	0
ZP_02475287.1	0	YP_111276.1	0	ZP_02510019.1	0
ZP_02459802.1	1.40E-04	ZP_02485782.1	1.40E-04	ZP_02451631.1	0.00221
ABB80392.1	0.53197	ACG60781.1	0.30367	AAG02357.1	0.21333
YP_003101412.1	0.24979	ABL74938.1	0.08059	YP_002908898.1	0.46224
ZP_06711711.1	0.11784	BAI44051.1	0.13935	ACZ54326.1	0.47185
YP_003509005.1	0.80993	YP_003512800.1	0.40212	YP_001702991.1	0.04482
YP_003659707.1	0.12944	ABK01393.1	0.47765	ADI09565.1	0.42224
ZP_04700364.1	0.07362	CAJ89362.1	0.04466	ZP_05543395.1	0.02472
YP_001702992.1	0.10399	YP_003659708.1	0.09709	ZP_06396934.1	0.00562
ZP_06220286.1	1.50E-04	YP_003338150.1	0.18067	ZP_06399924.1	1.60E-04
ZP_06219513.1	0.00261	YP_440276.1	0	ZP_05589167.1	0
ZP_02385622.1	0	ZP_02371767.1	0.00245	ZP_02405592.1	0
YP_106049.1	0	YP_001025961.1	0	YP_001074483.1	0
[YP_110331.1	0	ZP_03790157.1	0	ZP_02458375.1	0
ZP_02414120.1	0	ZP_02450202.1	0	ZP_02500743.1	0
ZP_02508684.1	0	ZP_00442116.2	0	YP_337019.1	0
ZP_04520398.1	0	ZP_04955541.1	0	ZP_02484375.1	0
ZP_02473932.1	0	ZP_03454554.1	0	ZP_02492559.1	0
YP_001061543.1	0.00247	ZP_02365045.1	0.00261	ZP_02357884.1	1.40E-04
ZP_06587882.1	0	ZP_04696972.1	0	ZP_02467525.1	0.37859
AAO39784.1	0.19104	ADI09567.1	0.57807	YP_002908630.1	0.53462
YP_607783.1	0.41471	AAM12934.1	0.62709	YP_003452767.1	0.22101
ZP_00052686.2	0.03815	YP_421312.1	0.01623	ZP_04750189.1	0.526
ZP_04711070.1	1.40E-04	ZP_04695887.1	1.40E-04	YP_001823996.1	1.40E-04
ZP_06282380.1	1.50E-04	ZP_05529014.1	0.12308	ZP_04697873.1	0.20239
YP_003380450.1	0.35705	ZP_05529824.1	0.38328	YP_003384136.1	0.2018
ADI04081.1	0.06954	ZP_04700358.1	0.20352	ZP_05531065.1	0.06123
ZP_02415191.1	0	ZP_02451264.1	0	ZP_02501785.1	0
ZP_02509680.1	0	ZP_02485431.1	0	ZP_02459437.1	0
ZP_02474934.1	0	ZP_02493569.1	0	ZP_02406692.1	0
CBA18136.1	0.36926	ZP_02371233.1	1.40E-04	ZP_02385129.1	0.00519

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ZP_02468612.1	0.39405	YP_003529803.1	0.77067	ZP_02468615.1	0.36355
NP_940470.1	0.79977	YP_001536929.1	0.03275	YP_001159476.1	1.50E-04
ACZ54282.1	0.57221	ADI09173.1	0.65484	YP_003658640.1	0.72796
ZP_06913871.1	0.47809	ZP_05520928.1	0.89937	ZP_01077683.1	0.54299
CBA75678.1	0.47815	ACI32872.1	0.00396	ACI32873.1	0.01826
ACI32871.1	0.00913	AAX62322.1	0.03141	AAX62328.1	0.02476
AAX62320.1	0.01438	AAX62317.1	0.04007	AAX62350.1	0.01766
AAX62329.1	0.02293	ZP_04588001.1	0.0352	YP_234879.1	0.02025
ZP_05639079.1	1.40E-04	YP_273986.1	0.00718	ZP_06480862.1	0.00569
YP_347999.1	0.04678	YP_608303.1	0.10428	YP_003101612.1	0.17139
ZP_04750209.1	0.33531	ADI06109.1	0.11929	AAT72341.2	1.40E-04
AAT42010.1	1.50E-04	AAO39107.1	0.0507	ZP_01815407.1	0.10095
XP_002772144.1	0.14383	XP_002774261.1	0.04791	YP_003039292.1	0.26782
ZP_01814279.1	0.34645	YP_002911533.1	0.0601	YP_439430.1	0.00534
ZP_02370747.1	0.0058	ZP_02466490.1	0.01171	YP_001062644.1	0
ZP_02406885.1	0	ZP_02459638.1	0	ZP_03795732.1	0
ZP_02509870.1	0.00266	ZP_02415390.1	1.50E-04	ZP_02493789.1	0
YP_335298.1	0	ZP_02451461.1	0	ZP_04899826.1	0
ZP_04522679.1	0	ZP_01770218.1	0	YP_111186.1	0
ZP_04967973.1	0	ZP_03450028.1	0	ZP_02485628.1	0
XP_002401690.1	0	ZP_04700034.1	0	CAM34278.1	0.45103
YP_003485692.1	0.80987	ZP_03231753.1	0.67673	ABK01395.1	0.44824
YP_002911536.1	0.14728	ZP_02370750.1	0.00265	YP_439433.1	0
ZP_05590818.1	0	ZP_02384635.1	1.40E-04	ZP_01770132.1	0.00282
ZP_02466487.1	0.01134	ZP_04521352.1	0	ZP_04899708.1	0
YP_335295.1	0	YP_111183.1	0	ZP_02415385.1	0
ZP_02493786.1	0	YP_001062641.1	0	ZP_04896773.1	0
ZP_02459631.1	0	ZP_02451454.1	0	ZP_04967970.1	0
ZP_02485622.1	0	YP_001075598.1	0	ZP_02475131.1	0
ZP_02502031.1	0	ZP_02406878.1	1.60E-04	AAO39109.1	0.03397
ZP_01815405.1	0.10876	YP_003041053.1	0.2774	ZP_01898880.1	0.15979
ZP_06185950.1	0.62364	ZP_03626595.1	1.43707	ZP_05493846.1	0.78699
ZP_06775487.1	0	ZP_05004800.1	0	NP_928524.1	0.44357
YP_003450670.1	0.59243	YP_702174.1	0.03097	YP_002779115.1	0.03389
AAU93835.1	0.00589	AAU93836.1	0.01006	AAU93834.1	0.01322
YP_003123078.1		ZP_06143609.1	0.67611	ZP_06720762.1	0.62451
CAO82980.1	1.40E-04	CAO82987.1	0.0087	ZP_06470021.1	0.75584
ZP_06470020.1	0.48949	ZP_06470023.1	0.57483	ZP_04221543.1	0.36043
YP_001422333.1	0.34926	YP_003353664.1	0.40106	ZP_04087647.1	0.20811
ZP_05493843.1	0.3751	YP_002506689.1	0.28413	YP_003353668.1	0.47214
ZP_04087649.1	0.28196	YP_002772676.1	0.45375	ZP_01724484.1	1.50E-04
AAX62325.1	0.01419	YP_001698936.1	0.00222	YP_001395738.1	0.22389
NP_721710.1	0.5427	ZP_06598569.1	0.48958	YP_001395123.1	0

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YP_002472072.1	0	YP_002506696.1	0.41735	YP_002772674.1	0.391
ZP_05493844.1	0.41499	YP_001395121.1	0.32402	ZP_04162370.1	0.37413
YP_002506690.1	0.25276	YP_002506691.1	0.27267	YP_002506697.1	0.37001
YP_002505319.1	0.32119	ZP_04803476.1	0.41209	YP_002505318.1	0.34388
YP_003123086.1	0.48054	ZP_04805638.1	0.6395	ZP_04087646.1	0.23535
YP_003353663.1	0.57946	YP_001307397.1	0.4612	YP_002506698.1	0.39903
ABK01379.1	0.57209	YP_002772738.1	0.24966	ZP_02328324.1	0.14774
ZP_06873002.1	1.40E-04	spQ9R9J1.1	0.00273	ACI22671.1	0.00273
AAQ07410.1	0.01372	BAB69698.1	1.50E-04	AAN07012.1	0.00273
ABY89498.1	0	YP_001421412.1	0	ZP_01386297.1	0.93901
ZP_01132576.1	1.11442	CAH55638.1	0.16463	CAH55655.1	0.16276
XP_001934718.1	3.70791	AAM78457.1	2.90289	ZP_05495050.1	3.25348
XP_001227513.1	2.29908	YP_003138779.1	1.00841	ZP_05519955.1	1.108
ZP_06913881.1	1.65867	XP_001944758.1	4.3266	XP_361344.2	4.14778
YP_001232332.1	3.79362	YP_002911513.1	0.77313	YP_001185900.1	0.87885
ZP_01626767.1	0.41171	ZP_05095199.1	0.18945	ZP_05126698.1	0.04981
ZP_01102617.1	0.05048	YP_001981921.1	0.20902	YP_002797779.1	0.08118
ZP_01368193.1	0	YP_793645.1	0	ZP_04937267.1	0
NP_253861.1	0	YP_002443144.1	0	ZP_06881505.1	0
YP_001351231.1	1.40E-04	ZP_01223374.1	0.33472	ZP_06191937.1	0.01939
YP_003611123.1	0.07485	ZP_01625089.1	0.36971	ZP_01616254.1	0.3501
ZP_01165036.1	0.16707	ZP_01075436.1	0.12411	YP_001342335.1	0.10718
YP_574978.1	0.32623	YP_003469774.1	0.38251	ZP_01114895.1	0.11833
ZP_01900699.1	0.10348	YP_132684.1	0.00437	ZP_01222197.1	0.01108
ZP_06157389.1	0.08112	ZP_01159471.1	0.02807	ZP_01233271.1	0.00505
YP_527077.1	0.41336	ACH72901.1	0.15517	XP_681084.1	0.03178
AAC49198.1	0.05154	ZP_06829497.1	0.30476	YP_002778327.1	0.10793
CAA46024.1	0	ZP_06837277.1	0	ZP_03394081.1	0.41892
ZP_04835907.1	0.18946	NP_940183.1	0.11091	YP_701403.1	0.10143
ZP_04387794.1	0.12868	YP_002767320.1	0.1069	ZP_06604979.1	0.13686
YP_117466.1	0.26604	YP_003646283.1	0.51453	YP_003273140.1	0.2159
YP_640811.1	0.00617	YP_001071929.1	0.01576	YP_001702252.1	0.13879
ZP_05228143.1	0.09941	YP_889015.1	0.00816	AAO43178.1	0.04654
YP_001133797.1	0.19851	YP_954908.1	0.05751	YP_907384.1	0
YP_001852225.1	0	NP_301868.1	0.03682	ZP_06433799.1	0
NP_856198.1	0	ZP_06518033.1	0	ZP_05765008.1	0
ZP_03425830.1	1.40E-04	ZP_06522069.1	0.05426	NP_337093.1	0.12418
NP_217040.1	0.00414	ZP_04749666.1	0.01429	ZP_06851996.1	0.07944
NP_961266.1	0	YP_880884.1	0	ZP_05215994.1	0.00325
YP_002835610.1	0.26418	ZP_03710807.1	0.22244	NP_601696.1	0.03823
BAB99888.1	0.03898	ZP_03934033.1	0.30263	YP_001139316.1	0.00751
ZP_05750911.1	0.00718	NP_739002.1	0.18492	ZP_04837185.1	0
ZP_03709883.1	0	ZP_02044858.1	0.14658	ZP_06608499.1	0.05549

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ZP_06043461.1	0	YP_002833817.1	0	ZP_03935133.1	0.01734
ZP_06837028.1	1.40E-04	CAA61087.1	0.21051	NP_737523.1	0.03094
YP_225128.1	1.40E-04	YP_001137826.1	0.00528	NP_600065.1	1.50E-04
YP_003659808.1	0.42194	ZP_03926457.1	0.1764	ZP_06751771.1	0.12604
ZP_03742148.1	1.60E-04	ZP_03324816.1	0.01544	YP_003359863.1	0.03552
NP_696693.1	0	YP_002323720.1	0	ZP_06596502.1	0
ZP_04663991.1	0	ZP_03976473.1	0	YP_003662064.1	0
ZP_03646962.1	0.03463	ZP_00121397.1	0.03147	ZP_03936961.1	0.07916
ZP_04448562.1	1.50E-04	YP_909119.1	1.50E-04	ZP_02028077.1	0.00517
ZP_02917151.1	0.00291	ADC85342.1	0	ZP_02963252.1	0
ZP_05966223.1	0.05254	ZP_03918327.1	0	ZP_03972703.1	0
ZP_06755645.1	0.31332	YP_003374392.1	0.05739	ZP_06927266.1	0.0728
ZP_06162645.1	0.42275	ZP_05312484.1	1.35629	ZP_03391714.1	0.17083
YP_003141425.1	0.2367	ZP_02181571.1	0.51793	YP_001297183.1	0.53021
ZP_01254925.1	0.84152	YP_003194614.1	0.59069	YP_863570.1	0.66006
ZP_00950030.1	0.4257	YP_003586997.1	0.67993	ZP_04057035.1	0.68486
NP_824837.1	0.91557	ZP_05511357.1	0.54596	YP_001159612.1	0.98745
ZP_05541599.1	0.69104	ZP_04685001.1	0.34497	NP_824841.1	0.37942
ZP_05517492.1	0.29469	YP_925302.1	0.88567	ZP_04215337.1	0
YP_003667781.1	0	BAF92595.1	0.97426	YP_002505220.1	1.52221
AAF81234.1	0.59445	YP_798517.1	0.11492	YP_002251.1	0.0169
NP_711611.2	0.04608	ZP_06418837.1	0.20038	ZP_05917376.1	0.01966
ZP_06422635.1	0.04316	ZP_06256105.1	0.13317	ZP_00949731.1	0.27886
YP_003121552.1	0.27589	YP_003086385.1	0.32006	YP_003140964.1	0.03376
ZP_03391218.1	0.00778	ZP_04057463.1	0.1303	ZP_03850781.1	0.25158
YP_001193458.1	0.23791	YP_001297141.1	0.17429	ZP_03207264.1	0.17501
ZP_03676276.1	0.22068	ZP_04541977.1	0	ZP_04556528.1	0
ZP_03300359.1	0.00574	ZP_05253899.1	0.00583	YP_001298327.1	0
ZP_06743059.1	0	ZP_02064226.1	0.00841	ZP_05758301.1	0.00482
ZP_06618708.1	1.40E-04	ZP_04549661.1	0.0038	ZP_03016928.1	0.10286
ZP_03678625.1	0.15539				

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Sequence	Distance	Sequence	Distance	Sequence	Distance
ADH85834.1	0.14998	ZP_01289642.1	0.18061	ZP_06369006.1	0.61844
YP_002990146.1	0.44035	ZP_03738402.1	0.25819	ZP_01312285.1	0.32054
YP_358072.1	0.44415	ZP_05311649.1	0.4012	ZP_05111701.1	0.80827
ZP_03724762.1	0.32419	ZP_05059654.1	0.62712	ZP_06209941.1	0.39243
ZP_03569674.1	0.02479	ZP_03588216.1	0.032	ZP_02909369.1	0.00479
YP_775500.1	0.00321	YP_001810768.1	0.10131	YP_001115148.1	0.1307
ZP_02379839.1	0.11253	NP_521918.1	0.10953	YP_001893286.1	0.2411
ZP_06464972.1	0.08517	ZP_06293523.1	0.08723	ZP_02884832.1	0.01251
ZP_03270487.1	0.10911	YP_001896666.1	0.05494	ZP_06842831.1	0.11746
YP_560057.1	0.02927	YP_003605835.1	0.42239	YP_001856939.1	0.11916
YP_003075450.1	0.50175	ZP_01305636.1	0.63534	AAR05308.1	0.15811
AAS73114.1	0.1653	ZP_05826354.1	0.03157	ZP_04662423.1	0.00795
ZP_06786976.1	0	YP_001083175.1	0	YP_001844768.1	0.00601
ZP_06691341.1	0.0546	ZP_03821678.1	0.04768	ZP_06066528.1	0.01733
ZP_05359830.1	0.04673	ZP_05826267.1	0.00196	YP_001083897.1	0.00611
YP_001707797.1	1.50E-04	YP_045600.1	0.12914	ZP_06068924.1	0.01528
ZP_06062471.1	0.01113	ZP_06057833.1	0.00699	EEZ80028.1	0.12363
AAR38142.1	0.16084	YP_001219728.1	0.09154	YP_904181.1	0.14397
ACX30628.1	0.10697	YP_115272.1	0.19567	ZP_01127508.1	0.3906
YP_001209235.1	0.29919	ZP_05706248.1	0.19585	ZP_04600655.1	0.04389
ZP_06734642.1	0.01591	ZP_03714506.1	0.02788	YP_546001.1	0.12589
YP_003050647.1	0.16613	ADI29479.1	0.10109	YP_003048970.1	0.16339
ZP_01552028.1	0.25721	ZP_05081371.1	0.15427	YP_003528179.1	0.04286
ZP_05047759.1	0.03418	YP_343779.1	0.00793	ZP_01999041.1	0.16003
YP_003262866.1	0.31567	YP_003551900.1	0.2908	ZP_02190711.1	0.12725
ZP_06055545.1	0.25255	ZP_01264438.1	0	YP_265820.1	0
ZP_05069324.1	0.03946	ZP_01256162.1	0.00546	ZP_01016621.1	0.52602
YP_002542845.1	0.07546	NP_353185.2	0.03975	YP_001329102.1	0.02603
YP_002828052.1	0.02957	NP_384353.1	0.01456	YP_001976318.1	0.00641
YP_467660.1	0.01796	YP_002283545.1	1.60E-04	YP_765721.1	0
YP_002978157.1	0	ZP_02164847.1	0.07844	YP_003064874.1	0.29759
YP_002548113.1	0.08939	YP_676470.1	0.06887	ZP_05810216.1	0.02441
NP_106207.1	0.0124	ZP_06348918.1	0.23005	YP_001414890.1	0.22888
YP_003595197.1	0.02996	NP_422513.1	0.01295	YP_001686679.1	0.09047
ZP_04768846.1	0.21318	YP_002128871.1	0.14656	ZP_05033949.1	0.08778
ZP_06170564.1	0.12861	ZP_00957260.1	0.21786	YP_003061421.1	0.3433
YP_758278.1	0.16093	ZP_05377761.1	0.23065	YP_002362501.1	0.27436
YP_001831475.1	0.07367	YP_001769123.1	0.02885	YP_002495728.1	0.02408
YP_001923208.1	0.02664	YP_001637918.1	0.00804	YP_002419322.1	0.00404
YP_002961569.1	1.40E-04	YP_001755351.1	0.0701	YP_001202284.1	0.10258
YP_779195.1	0.10053	YP_001236276.1	0.05009	YP_530242.1	0.07606
NP_945779.1	0.00597	YP_001989466.1	1.60E-04	ZP_06360426.1	0.00599

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YP_484234.1	0.02488	YP_567362.1	0.00597	YP_001369291.1	0.0179
ZP_04681550.1	0.00244	NP_540874.1	0	ZP_05448654.1	0
pdb3LRFA	0	YP_222801.1	0	NP_699146.1	0
ZP_05450313.1	0	ZP_05180021.1	1.60E-04	YP_032987.1	0.05223
YP_031840.1	0.02674	YP_002971187.1	0.02364	YP_989518.1	0.04279
YP_001608624.1	0.0357	NP_767410.1	0.04996	YP_316653.1	0.01832
YP_575402.1	0.02025	ZP_01045155.1	0.00479	YP_001414969.1	0.09786
YP_002287508.1	0.03544	ZP_06890349.1	0.0568	ZP_01228420.1	0.2277
ZP_05085736.1	0.19609	YP_001527559.1	0.13994	ZP_06866270.1	0.11635
ZP_05115615.1	0.14741	ZP_01902655.1	0.04839	ZP_00958316.1	0.04969
ZP_01746730.1	0.03658	ZP_05781073.1	0.07388	ZP_01445555.1	0.04513
ZP_01157613.1	0.11302	ZP_01750750.1	0.05071	ZP_01002575.1	0.04841
ZP_05050360.1	0.00176	ZP_05063430.1	0.02883	ZP_01039829.1	0.01668
YP_458237.1	0.08584	ZP_01862967.1	0.01442	ZP_05076693.1	0.04896
ZP_05340648.1	0.05816	ZP_01015873.1	0.06899	YP_509598.1	0.08281
ZP_01000969.1	0.06816	YP_684067.1	0.03135	ZP_02141995.1	0.02876
ZP_02154887.1	0.01757	ZP_05100864.1	0.03581	ZP_00948270.1	0.00591
ZP_00953725.1	1.40E-04	ZP_05077780.1	0.03173	ZP_01752673.1	0.01238
YP_612176.1	0.01245	ZP_05089308.1	1.50E-04	ZP_02149114.1	0.00622
ZP_02146448.1	1.40E-04	ZP_05739237.1	0.00614	ZP_01054588.1	0.03956
ZP_05785154.1	0.0226	YP_165267.1	0.0383	ZP_05122633.1	0.04115
ZP_01879087.1	1.40E-04	ZP_01036320.1	0.00602	ZP_01743466.1	0.12198
ZP_01447695.1	0.32248	ZP_05842829.1	0.0606	YP_001532352.1	0.08253
YP_915443.1	0.07668	YP_002520284.1	0	YP_354693.1	0
YP_001045764.1	0	YP_001170094.1	0.01469	YP_003578805.1	0.04886
ZP_06351986.1	0.01198	ZP_06542850.1	0.00577	ZP_04562837.1	0.00294
YP_003366266.1	0.03575	YP_003003700.1	0.00838	YP_003334327.1	0.01286
ZP_05730617.1	0.01969	YP_003296467.1	0.15204	YP_001479594.1	0.04039
YP_003520977.1	0.01118	NP_416826.1	0.3704	ZP_03377190.1	0.0789
YP_001436999.1	0.00446	YP_003211314.1	0.01132	ZP_05968574.1	0.00985
YP_001177587.1	0.04187	YP_003614155.1	1.50E-04	CBK87132.1	0.01061
YP_002988184.1	0.10605	YP_404083.1	1.60E-04	NP_708205.1	1.40E-04
YP_689808.1	0.0035	ZP_06658259.1	0.04386	YP_002382013.1	0.0021
YP_001881145.1	0.00346	pdb2VB7C	1.40E-04	pdb1F91A	0
pdb1EK4A	0	pdb1H4FA	1.50E-04	pdb2BYWA	0.00348
pdb2BYZA	1.60E-04	pdb2BYYA	0.00344	pdb1DD8A	1.40E-04
CAA09932.1	0.00346	CAA09934.1	0.00346	NP_311234.1	1.40E-04
NP_288897.1	1.40E-04	ZP_02901750.1	1.40E-04	YP_003018371.1	1.60E-04
ZP_03831287.1	0.00365	YP_051153.1	0.01501	YP_003258865.1	1.40E-04
ZP_03828447.1	0.07472	YP_001569590.1	0.00698	YP_002227292.1	0
NP_456920.1	0	ZP_03350755.1	0	YP_217367.1	0
ZP_06546109.1	0	YP_002237279.1	0.00347	ZP_06016498.1	0.00346
YP_001336360.1	1.40E-04	YP_001452054.1	0.01896	CAA09933.1	0.08311

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YP_001907100.1	1.40E-04	YP_003531781.1	0.0227	YP_002648240.1	0.03392
YP_455303.1	0.47637	YP_588806.1	0.21594	NP_660443.1	0.19854
YP_002468408.1	1.40E-04	NP_239925.1	0.00615	NP_777716.1	0.25213
YP_802627.1	0.43086	NP_871411.1	0.3484	NP_878781.1	0.27219
YP_278005.1	0.113	YP_003603350.1	0.26338	YP_002923015.1	0.13762
AAS62611.1	0	NP_668909.1	0	ZP_04629957.1	0.00568
ZP_04635562.1	1.40E-04	YP_071136.1	1.40E-04	ZP_02333972.1	0.00512
ZP_04612797.1	0.00512	ZP_04632502.1	0.00513	ZP_04640941.1	0.00889
ZP_04620215.1	0.02554	ZP_04624825.1	0.01142	YP_001005608.1	0.01105
ZP_04615159.1	0.00564	ZP_06639397.1	0.02596	ZP_06191145.1	0.01901
YP_003040275.1	0.02879	NP_930413.1	0.07194	CBA76417.1	0.04171
YP_003468863.1	0.16416	ZP_06124683.1	0.01319	ZP_03320363.1	0.0242
ZP_05973837.1	0.01484	ZP_03803448.1	0.0246	YP_002151524.1	0.02502
ZP_02961167.1	0.03993	ZP_06715531.1	0.01722	YP_002934130.1	1.60E-04
YP_001344193.1	0.06492	YP_088783.1	0.09368	YP_003255459.1	0.03272
YP_003007711.1	0.00178	NP_245276.1	0.00859	ZP_05919453.1	0.01068
ZP_05992959.1	0.00415	ZP_04976818.1	1.60E-04	ZP_04752901.1	1.40E-04
ZP_02477309.1	0	YP_002476542.1	0	ZP_03611905.1	0.02263
NP_873153.1	0.02556	ZP_00134992.2	0.00824	YP_001968906.1	1.40E-04
ZP_01785500.1	1.40E-04	ZP_00157168.1	0	ZP_01787708.1	0
ZP_01790605.1	0	YP_249062.1	0	ZP_01793229.1	0
ZP_01797646.1	0	ZP_00155106.2	0	NP_439682.1	0
ZP_04467254.1	0.00418	YP_718877.1	0.04349	ZP_01957620.1	0.00592
ZP_06081012.1	0.01182	ZP_05881259.1	0.03452	ZP_01218778.1	0.01218
ZP_06154807.1	1.40E-04	ZP_01235107.1	0.01207	ZP_01159327.1	0.0059
ZP_01816638.1	0.00512	ZP_05885353.1	0.0091	ZP_01258865.1	0
ZP_04921896.1	0	ZP_06182546.1	0.00582	ZP_05119018.1	0.02829
YP_001446281.1	1.40E-04	ZP_01987087.1	1.40E-04	NP_798573.1	1.40E-04
ZP_05908382.1	1.40E-04	ZP_05944922.1	0.00843	ZP_02195796.1	1.40E-04
ZP_01867568.1	0.03788	NP_760859.1	0.03	ZP_00993114.1	0
ZP_01067044.1	0	YP_205083.1	0.03448	ZP_05876619.1	0.03204
YP_002262558.1	0.06259	ZP_06054151.1	0.01883	YP_130838.1	0.05939
ZP_04919940.1	1.50E-04	ZP_04411481.1	1.50E-04	ZP_06033950.1	0.00587
ZP_05716160.1	0.00589	ZP_06038580.1	1.40E-04	ZP_01978233.1	0.0058
ZP_01676599.1	1.40E-04	YP_856451.1	0.03472	YP_001142162.1	0.04432
YP_270470.1	0.14914	ZP_01135065.1	0.01047	YP_340579.1	0.01138
ZP_01613390.1	1.30E-04	YP_002892770.1	0.09373	ZP_01216827.1	0.06832
YP_943359.1	0.05706	ZP_01899169.1	0.13592	ZP_01044222.1	0.02889
YP_155410.1	0.0239	YP_662943.1	0.12568	YP_002125502.1	0.15952
ZP_01450055.1	0.10829	YP_928029.1	0.03862	YP_962955.1	0
YP_001051102.1	0	YP_001183965.1	0	YP_001366960.1	0
ZP_01706414.1	1.40E-04	YP_737543.1	0	YP_733557.1	0
YP_869115.1	0.00608	NP_718636.1	0.03722	YP_750081.1	0.03756

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YP_001094535.1	0.03537	YP_002312420.1	0.01602	ABN80398.1	0.03454
YP_003557639.1	0.02338	ZP_02157419.1	0.00618	YP_001761374.1	0.02193
YP_001473383.1	0.00842	YP_001501466.1	0.00541	YP_001674867.1	0.0985
YP_562490.1	0.02887	ZP_01618174.1	0.1353	ZP_01113650.1	0.1424
ZP_01078643.1	0.05386	YP_001343072.1	0.03576	ZP_01166523.1	0.10146
XP_001618992.1	0.10272	ZP_05096649.1	0.11785	ZP_05129002.1	0.04147
ZP_01102057.1	0.03027	ZP_01625044.1	0.10054	ZP_04956559.1	0.07778
ZP_05041487.1	0.01568	YP_692554.1	0.02116	YP_572517.1	0.07124
YP_001001615.1	0.11587	YP_742212.1	0.12548	YP_001981258.1	0.09085
YP_003072546.1	0.07114	YP_526472.1	0.06233	YP_437473.1	0.26831
YP_003147269.1	0.19312	ZP_01224524.1	0.31419	ZP_01736169.1	0.15492
ZP_01895347.1	0.16661	ZP_05103687.1	0.11731	XP_002295282.1	0.30313
XP_002184832.1	0.1343	YP_002800050.1	0.07428	YP_001187958.1	0.03201
YP_258862.1	0.0219	YP_609144.1	0.00623	YP_001267033.1	0
NP_746292.1	0	YP_001669972.1	1.60E-04	YP_001750350.1	0.00622
YP_349941.1	0.01439	YP_001172408.1	0.08636	AAC45620.1	0.04117
NP_250300.1	1.60E-04	YP_001349019.1	0	ZP_01364959.1	0
YP_791642.1	0	ZP_04928032.1	0	YP_002871471.1	0.0194
YP_274213.1	1.60E-04	ZP_04591091.1	0.00613	NP_792031.1	0.01215
AAO50078.1	0.08054	YP_235100.1	0.0174	YP_392209.1	0.16151
YP_972495.1	1.50E-04	ZP_04764797.1	0.08833	ZP_06211922.1	1.50E-04
YP_996926.1	0.10404	YP_001562303.1	0.06302	YP_984852.1	0.04842
ZP_03541121.1	0.0164	YP_003280282.1	0.08096	YP_001970478.1	1.40E-04
ZP_05137281.1	1.20E-04	YP_002026841.1	0.00748	NP_643932.1	0.01162
YP_365473.1	0.01177	ZP_06729897.1	1.40E-04	ZP_06703707.1	0.00634
ZP_06487012.1	1.40E-04	YP_199400.1	0	YP_001915613.1	0
ZP_02244704.1	0.00578	ZP_06489461.1	0.00576	YP_244713.1	0.01734
NP_635973.1	0.1014	ZP_01736726.1	0.19222	YP_960409.1	0.07772
ZP_01893796.1	0.0409	ZP_05620248.1	0.21921	YP_003626389.1	0.14893
YP_581450.1	0.02653	YP_265181.1	0.00765	ZP_06241817.1	1.00463
ZP_06244121.1	0.68676	YP_900594.1	0.56429	YP_065595.1	0.38517
ADH85832.1	0.10426	ZP_01289644.1	0.11602	YP_002990144.1	0.72822
ZP_06369008.1	0.55425	YP_358070.1	0.53528	ZP_03738400.1	0.59497
ZP_01312283.1	0.47074	ZP_05311652.1	0.45336	YP_003059691.1	0.89283
CAM75572.1	0.27195	YP_001974187.1	0.04928	YP_002030290.1	0.03464
YP_586526.1	0.34265	ZP_06209943.1	0.1718	YP_001893285.1	0.05717
YP_001896667.1	0.01675	ZP_03270486.1	0.05483	ZP_06293524.1	0.01484
ZP_06464973.1	0.04684	ZP_02381937.1	0.07285	YP_775499.1	0.04589
ZP_02909368.1	0.03697	YP_001810767.1	0.24446	YP_001856938.1	0.04292
NP_521919.1	0.04091	ZP_05623763.1	0.53186	YP_003251061.1	0.26867
YP_001980641.1	0.29061	YP_154535.1	0.30418	YP_341893.1	0.1603
ZP_01896905.1	0.33213	YP_003074646.1	0.39093	YP_749038.1	0.12006
YP_929266.1	0.14262	YP_732472.1	1.50E-04	YP_867975.1	0.01141



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NP_719907.1	0.02032	YP_001364558.1	0	YP_002356293.1	0
YP_001048729.1	1.50E-04	YP_001552773.1	1.50E-04	ZP_01705090.1	1.60E-04
YP_001181962.1	0.00591	YP_961690.1	0.00591	YP_001762957.1	0.08266
YP_001503748.1	0.05213	YP_001672600.1	0.10867	YP_001095651.1	0.07712
YP_002309713.1	0.11147	YP_001472051.1	0.06546	ZP_02157933.1	0.37669
YP_003558856.1	1.50E-04	YP_001342721.1	0.28476	ZP_05919802.1	0.28534
YP_857871.1	0.00774	YP_001140807.1	0.04448	ZP_04638062.1	0.00534
YP_001005252.1	0.02581	ZP_04620318.1	0.27346	ZP_04611989.1	0.02527
ZP_04633920.1	0.00663	ZP_06637042.1	0.07021	ZP_06191665.1	0.08008
YP_001477137.1	0.0774	YP_002384546.1	0.00789	YP_002414606.1	1.50E-04
NP_753105.1	0.00582	YP_405089.1	0.00578	NP_290040.1	1.40E-04
YP_001178605.1	0.03431	YP_003518859.1	0.03763	YP_003294879.1	0.05992
ZP_04559290.1	0.02996	YP_001456404.1	0.01806	YP_003367734.1	0.0288
YP_003615331.1	0.02587	CBK86176.1	0.08013	ZP_06015414.1	0.06796
YP_003335713.1	0.07498	YP_003261877.1	1.50E-04	YP_052574.1	0.01338
ZP_03827557.1	0.12999	YP_003212367.1	0.05656	ZP_03727415.1	0.31576
ZP_01216612.1	0.30538	ZP_01234257.1	0.10244	YP_131777.1	0.01627
ZP_01217868.1	0.00786	YP_204243.1	0.10243	NP_797260.1	0.04428
ZP_05877007.1	0.1121	ZP_05944258.1	0.02584	ZP_05120212.1	0.01916
ZP_06181969.1	0.00663	ZP_01261993.1	0	ZP_04923335.1	0
ZP_01867991.1	0.09924	ZP_01064513.1	0.01468	YP_002416393.1	2.40E-04
ZP_01813068.1	0.0386	NP_933859.1	0.01874	NP_759076.1	0.07477
YP_003147765.1	0.38694	YP_001412778.1	0.47568	YP_257605.1	0.06751
YP_346155.1	0.05183	YP_606122.1	0.04128	ZP_05637566.1	0.00604
YP_233530.1	0.01349	YP_272715.1	1.40E-04	ZP_06457975.1	0
ZP_06478783.1	0	NP_794842.1	0.00694	ZP_03397599.1	1.40E-04
ZP_04586576.1	0.02314	YP_002870098.1	0.10885	XP_001618177.1	0.18821
YP_001633057.1	0.12741	ZP_06687146.1	0.15205	ZP_05988516.1	1.40E-04
ZP_04977578.1	0.00634	ZP_05992663.1	1.40E-04	YP_003008136.1	0.06045
YP_003255154.1	0.01011	ZP_06635559.1	0.00841	YP_718312.1	0.01282
YP_001785307.1	1.40E-04	ZP_03719734.1	0.00661	ZP_04758084.1	1.50E-04
ZP_05984899.2	0.01681	ZP_05318198.1	0.00753	ZP_05983470.2	0.01765
YP_001599720.1	1.60E-04	YP_002343230.1	0.00688	CBA09413.1	0.01467
NP_274707.1	0.02334	YP_975584.1	0.0333	ZP_05986086.2	0.01299
ZP_06863400.2	0.00675	ZP_04603126.1	0.08753	ZP_06753525.1	0.09986
ZP_06735094.1	0.01027	ZP_03714795.1	0.01431	ZP_05704912.1	0.30724
YP_001407754.1	0.11583	YP_001467518.1	0.17357	ZP_03611136.1	0.11297
ZP_05362819.1	0.03068	ZP_04755453.1	0.16186	YP_001677817.1	0.11705
YP_001083580.1	0	YP_001845193.1	0	ABO10978.2	0
ZP_06058731.1	0.07795	YP_045329.1	0.32082	ZP_05070175.1	0.67188
ZP_01910260.1	0.34207	YP_003388000.1	0.35983	ZP_01117271.1	0.18537
ZP_01053339.1	0.20471	ZP_01202446.1	0.50997	YP_003094878.1	0.50548
YP_003124664.1	0.26142	ZP_01048795.1	0.40714	YP_861647.1	0.54145

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ZP_01061756.1	0.38855	YP_001196140.1	0.24003	YP_003091915.1	0.1794
ZP_01884185.1	0.2017	ZP_01891871.1	0.51745	ZP_00950829.1	0.54354
YP_003195935.1	0.4522	YP_002430915.1	0.39465	YP_463036.1	0.29733
NP_819090.1	0.38421	YP_066139.1	0.2304	YP_003549038.1	0.17151
YP_001820167.1	0.13233	ZP_03726674.1	0.14627	ZP_05060006.1	0.13641
ZP_01877447.1	0.47428	ZP_01092567.1	0.32058	YP_003372751.1	0.20201
NP_864493.1	0.27101	ZP_01854488.1	0.29671	YP_070001.1	0
YP_001401488.1	0	NP_670016.1	0	ZP_06203956.1	0
YP_001607339.1	0.14897	YP_846744.1	0.52984	ZP_01908955.1	0.45141
ZP_06890133.1	1.3977	ZP_02163873.1	0.74185	AAW33972.1	0.43113
YP_002483589.1	0.68873	YP_439865.1	0.58858	ABK51298.1	0.01454
ABM63532.1	0.02714	YP_001613821.1	0.24241	ZP_05496377.1	0.23226
ZP_06873403.1	0.0574	ZP_03591438.1	0.17592	NP_389594.2	1.50E-04
CAC85720.1	0.63949	ZP_05543655.1	0.25129	YP_003124933.1	0.49988
YP_001078306.1	0	YP_111004.1	0	YP_105856.1	0
ZP_02406650.1	0	YP_001420576.1	0.56957	AAM12921.1	0.55706
ZP_02467740.1	0.36715	ZP_06562045.1	0	YP_001106769.1	0
BAF50726.1	0.24224	ZP_06217415.1	0.06278	ZP_06399726.1	0.05734
ZP_05004596.1	0.83096	YP_001547669.1	0.76356	ZP_06187207.1	0.25647
ZP_05110122.1	0.20788	YP_122466.1	0.00251	YP_094156.1	0.0031
YP_003617312.1	1.60E-04	YP_822027.1	0.42575	YP_425285.1	0.54539
YP_002361554.1	0.41026	ZP_06889914.1	0.35437	ZP_06886339.1	0.21
YP_003578022.1	0.43267	ZP_05843115.1	0.15174	ZP_05782268.1	0.12002
ZP_01003414.1	0.05465	ZP_01752085.1	0.07337	ZP_01156191.1	0.1256
ZP_01745477.1	0.11226	YP_001532959.1	0.06797	ZP_01742362.1	0.20713
YP_510090.1	0.2629	YP_915044.1	0.23671	YP_001043301.1	1.60E-04
YP_352835.1	0.0502	YP_002525444.1	1.40E-04	YP_001167244.1	1.50E-04
ZP_05051950.1	0.02094	ZP_05064639.1	0.10319	ZP_05102230.1	0.19929
ZP_02153734.1	0.07812	YP_167167.1	0.03765	ZP_05787692.1	0.04002
ZP_05123439.1	0.04626	ZP_00962398.1	0.03185	ZP_00954919.1	0.0062
ZP_05090672.1	0.01932	ZP_02150668.1	1.50E-04	ZP_02143887.1	0.00381
ZP_01903823.1	0.03935	ZP_01880841.1	0.01376	ZP_01033905.1	0.02364
ZP_01001483.1	0.06582	ZP_00960851.1	0.14115	ZP_05074687.1	0.0782
ZP_02139327.1	0.02886	YP_682858.1	0.01471	ZP_01056837.1	0.0396
ZP_01753548.1	0.05242	ZP_05079061.1	0.04269	YP_613216.1	0.00851
ZP_05742903.1	0.02334	ZP_01448490.1	0.23868	ZP_01012728.1	0.33724
ZP_05341319.1	0.33139	YP_003376267.1	0.39835	ZP_02164519.1	0.48284
YP_002278994.1	0.24517	ABR15465.1	0.33982	CAA68624.1	0.08204
YP_770460.1	0.15295	prf1205214B	0.00938	YP_001314742.1	0.05372
spP06231.1	0.01343	NP_435712.1	1.50E-04	ZP_05809525.1	0.36203
NP_106417.1	0.13237	YP_002973093.1	0.06056	spP04684.2	0.02831
spP72331.1	0.17129	NP_105705.1	0.2968	ZP_05809301.1	0.14844
CAH04365.1	0.27662	YP_425137.1	0.48174	ZP_06866047.1	0.55535

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ZP_05375535.1	0.39707	ZP_06349120.1	0.27104	CBA28206.1	0.93289
YP_001702764.1	0.45054	ABW82983.1	0.27252	ABA18621.1	0.40559
YP_001268289.1	0.05849	NP_744922.1	0.16802	YP_002912095.1	0.58484
YP_786289.1	0.26119	ZP_06688702.1	0.33768	YP_001632743.1	0.16872
ZP_04765069.1	0.56563	CAZ89852.1	0.32941	YP_525230.1	0.22004
ZP_03699663.1	0.27092	YP_002943762.1	0.45936	YP_284398.1	0.30245
YP_525228.1	0.42676	YP_003261975.1	0.31563	YP_003165661.1	0.26301
YP_287366.1	0.10362	YP_001155735.1	0.76581	YP_003523075.1	0.16343
ZP_04832190.1	0.15875	YP_003050973.1	0.2133	XP_002534562.1	0.32703
ADI30159.1	0.37153	YP_982895.1	0.77259	ZP_03627763.1	0.82886
YP_003588935.1	0.6125	ZP_03492992.1	0.01669	YP_003185809.1	0.0236
ZP_06244137.1	0.64059	YP_065585.1	0.64746	ADH85820.1	0.06058
ZP_01289526.1	0.23961	ZP_05311668.1	0.35412	YP_002990129.1	0.6173
YP_358056.1	0.54468	YP_900613.1	0.58372	ZP_01312263.1	0.50494
ZP_06369022.1	0.77772	ZP_03738381.1	0.3982	ZP_06256113.1	0.57517
ZP_05917369.1	0.06872	ZP_06422628.1	0.10289	YP_003121558.1	0.42979
ZP_00949726.1	0.58659	ZP_03390222.1	0.58164	ZP_03850764.1	0.50278
YP_001193445.1	0.44356	YP_003585289.1	0.70673	ZP_03678619.1	0.02483
ZP_03016934.1	0.04508	ZP_05758307.1	1.40E-04	ZP_02064220.1	0.13826
ZP_04549656.1	0.19801	YP_003086380.1	0.96172	YP_678723.1	0.64296
ZP_06244130.1	0.94708	ZP_03738389.1	0.51828	ZP_01312271.1	0.46715
ZP_05311663.1	0.37945	YP_065576.1	0.64011	ADH85811.1	0.15653
ZP_01289517.1	0.16713	YP_285580.1	0.83256	YP_002945266.1	0.41821
YP_525206.1	0.13517	YP_003522985.1	0.29375	YP_003061266.1	1.06939
YP_003305157.1	0.71428	YP_003656472.1	0.88503	ZP_05070763.1	0.78523
YP_861700.1	0.32684	ZP_04056549.1	0.15998	YP_003140863.1	0.02521
ZP_03390320.1	0.01044	ZP_03850767.1	0.20265	YP_001297122.1	0.14163
YP_001193440.1	0.10557	ZP_00949723.1	0.39493	YP_003585286.1	0.31417
YP_003121563.1	0.53494	ZP_05253891.1	0.1162	ZP_03300367.1	1.50E-04
ZP_06088479.1	0.00647	ZP_06743051.1	0.01979	YP_001298335.1	0.01985
ZP_03016936.1	0.02035	ZP_03678617.1	1.40E-04	ZP_02064218.1	1.60E-04
ZP_05758309.1	0.11812	ZP_04549654.1	1.50E-04	YP_003086377.1	0.60822
ZP_06418846.1	0.33791	ZP_06422626.1	0.05934	ZP_05917367.1	0.06267
ZP_06256115.1	0.28382	YP_678720.1	0.46734	YP_003126446.1	0.47657
YP_003090156.1	0.60846	YP_677014.1	0.37498	YP_003305170.1	0.37573
YP_003656486.1	0.37345	ZP_05070543.1	0.56952	YP_586523.1	0.42383
CAM75569.1	0.4558	YP_003147762.1	0.52001	ZP_01896908.1	0.64817
YP_154532.1	0.36639	YP_001342718.1	0.51245	ZP_06209946.1	0.30944
NP_521922.1	0.19131	ZP_02909365.1	0.02605	ZP_03588220.1	0.01456
ZP_03569678.1	0.00818	ZP_02884828.1	0.05346	YP_001856935.1	0.22284
ZP_06293527.1	0.07583	ZP_03267920.1	0.05102	YP_003605839.1	0.03121
YP_272718.1	0.00718	ZP_05637569.1	0.00822	ZP_06457977.1	1.50E-04
ZP_06478786.1	0.01812	YP_606125.1	0.28735	YP_257608.1	0.31767

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YP_001412775.1	0.49989	YP_003059688.1	0.67551	YP_001633054.1	0.45218
ZP_04603067.1	0.20752	ZP_04757853.1	0.01004	ZP_05985026.1	0.02048
ZP_03719441.1	0.04392	ZP_04977582.1	0.18787	ZP_05988520.1	0.07989
YP_003008133.1	0.19427	ZP_06635562.1	0.10458	YP_003255157.1	0.01012
YP_001974190.1	0.02862	YP_002030293.1	0.0454	YP_002263465.1	0.37126
ZP_01064510.1	0.22392	YP_002416396.1	0.08546	ZP_01813071.1	0.22689
ZP_00990958.1	0.26009	ZP_01867988.1	0.22102	ZP_06181966.1	0.01056
ZP_01261990.1	0.00635	ZP_04923333.1	0.00637	ZP_01990640.1	1.50E-04
NP_797263.1	0.03341	ZP_01162777.1	0.31622	ZP_01217871.1	0.04076
ZP_06080406.1	0.25838	ZP_03725944.1	0.47919	YP_045326.1	0.5915
ZP_04633923.1	0.17441	YP_001005249.1	0.12891	YP_003261874.1	0.03014
ZP_03827560.1	0.08003	YP_052577.1	0.05481	YP_003212364.1	0.2062
CBK86173.1	0.26263	YP_003294882.1	0.06925	ZP_06015417.1	0.2125
YP_003518856.1	0.06804	YP_001456401.1	0.09886	YP_003367737.1	0.03789
YP_003501647.1	0	ZP_04001798.1	0	NP_753108.1	0
NP_290037.1	0.00661	ZP_05433023.1	1.40E-04	YP_002414603.1	1.40E-04
ZP_06650994.1	1.40E-04	YP_002384543.1	0.00666	ZP_06659530.1	0.00664
ZP_04559287.1	0.12406	YP_001677814.1	0.49805	ZP_05919799.1	0.43818
YP_003558853.1	0.07287	ZP_02157936.1	0.0697	YP_001095648.1	0.35539
YP_001762954.1	0.11143	YP_001472054.1	0.15752	YP_929263.1	0.24017
YP_002309716.1	0.26323	YP_001672603.1	0.26157	YP_003251064.1	0.86118
ZP_03611145.1	0.28803	YP_001467520.1	0.28945	YP_003632733.1	0.5976
ZP_05623767.1	0.60634	ZP_01910256.1	0.80287	ZP_01054985.1	0.85384
ACY68244.1	0.24069	YP_001829917.1	0.06757	YP_001775816.1	0
ZP_00651695.1	0	NP_298928.1	0.00647	NP_779348.1	1.40E-04
ZP_00681162.1	0.00647	YP_003374674.1	0.15755	NP_639337.1	0.00724
YP_245146.1	0.06638	ZP_06486300.1	0.02538	ZP_06491917.1	0.08029
YP_199102.1	0.04486	YP_365903.1	0.03322	ZP_02241507.1	0
YP_449456.1	0	ZP_06703070.1	0.02193	NP_644385.1	0.02079
YP_002942191.1	0.36006	YP_003459726.1	0.46247	YP_001980621.1	0.61591
YP_001020521.1	0.44855	YP_298128.1	0.24486	YP_622026.1	0.12296
ZP_02382200.1	0.11261	ZP_02894607.1	0.10504	YP_002229992.1	0.02821
YP_001809378.1	1.40E-04	YP_774708.1	0.06148	YP_001120697.1	0.18388
YP_001897894.1	0.04119	YP_002980293.1	0.06499	ZP_00943634.1	0.1394
NP_518548.1	0.10286	YP_002258668.1	0.00609	YP_002256260.1	0.01897
YP_316511.1	0.23997	YP_981607.1	0.25545	YP_935413.1	0.30817
YP_003165650.1	0.18313	YP_287381.1	0.26464	ADI30685.1	0.39606
YP_002219394.1	0.31575	ZP_03699668.1	0.21923	YP_525213.1	0.34372
YP_001101111.1	0.38799	YP_113407.1	0.21926	YP_003264101.1	0.30251
YP_003522979.1	0.39294	YP_003074629.1	0.68912	YP_743852.1	0.42303
YP_191804.1	0.57441	YP_634519.1	0.79619	ZP_01466318.1	0.46386
ZP_03104663.1	0	ZP_04221301.1	0	ZP_02356591.1	0.00633
ZP_02367317.1	1.50E-04	YP_048723.1	0.30757	AAB41300.1	0.09235

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ZP_04589966.1	0	NP_794432.1	0	ZP_06482660.1	1.40E-04
YP_003493452.1	0.32725	YP_003450264.1	0.39018	YP_003134783.1	0.645
YP_001613990.1	0.54521	ZP_06811707.1	1.06066	NP_242706.1	0.33622
ZP_04081953.1	0.46588	AAO39098.1	0.09982	ZP_01815417.1	0.20345
NP_687689.1	0.05578	NP_735104.1	0	AAD45681.1	0
ZP_00789999.1	0	NP_951519.1	0.19509	YP_002537369.1	0.28449
YP_001232333.1	0.17152	YP_384651.1	0.17865	YP_001952429.1	0.38611
CAD62192.1	1.16577	ZP_04604272.1	0.76478	CBL15495.1	0.1329
YP_003250871.1	0.31171	YP_002935560.1	0.19577	ZP_00740887.1	0.02539
ZP_04069494.1	0.02942	ZP_01306711.1	0.36066	ZP_01306707.1	0.25857
YP_002152609.1	0.00829	ZP_03839484.1	0.02264	ZP_05727900.1	0.10113
YP_003498860.1	0	ZP_06656970.1	0	NP_287053.1	0
ZP_05948313.1	0.05636	YP_003611540.1	0.13027	NP_903619.1	0.7636
YP_002505218.1	1.07945	YP_001231278.1	0.75008	YP_634524.1	0.7157
ZP_01999726.1	0.36409	CAL48955.1	0.67934	CAJ73555.1	0.67702
ACH85583.1	0.93413	ZP_05517491.1	0.2487	ADI09863.1	0.10894
NP_824842.1	0.14329	ZP_05486658.1	0.02792	ZP_05509590.1	0.02597
ZP_04685000.1	0.09702	YP_001824766.1	0.22986	ZP_05541598.1	0.23394
ZP_05480788.1	0.32561	YP_001159614.1	0.49635	YP_003339835.1	0.20489
ZP_05508656.1	0.37146	CAJ74368.1	0.6453	ZP_03630179.1	0.41196
ZP_03132299.1	0.45627	ZP_02929866.1	0.52648	ZP_03628562.1	0.37152
ZP_03126848.1	0.45961	CAJ74110.1	0.76079	ZP_06400217.1	0.00623
ZP_06215423.1	0.00656	YP_001159318.1	0.14754	YP_001537505.1	0.09495
ZP_05513707.1	0.26704	ADI04730.1	0.0901	YP_003492515.1	0.07819
ZP_06905331.1	0.82728	ZP_05508643.1	0.24815	ZP_06473129.1	0.3476
NP_348627.1	0.58053	ZP_06143152.1	0.24974	CBL18213.1	0.24034
ZP_00738592.1	0.02846	ZP_04069482.1	0.10274	YP_001616566.1	0.91391
YP_911568.1	1.28212	CAJ74107.1	0.78705	YP_760853.1	0.27541
YP_756448.1	0.31336	ZP_00957634.1	0.16178	YP_425510.1	0.12714
YP_003448854.1	0.23398	CAM75914.1	0.15572	ZP_00051952.1	0.01745
YP_421471.1	0.01011	ZP_01446594.1	0.22328	ZP_05340843.1	0.08435
ZP_01744433.1	0.10978	YP_509571.1	0.16664	ZP_01751699.1	0.09666
ZP_02138783.1	0.0375	YP_683235.1	0.01358	ZP_05781152.1	0.11375
ZP_00955630.1	0.03785	ZP_01158323.1	0.26462	ZP_05063460.1	0.13214
ZP_05052953.1	0.04659	ZP_01444882.1	0.07796	YP_916684.1	0.10313
YP_003577832.1	0.07824	ZP_02154033.1	0.07571	ZP_05100647.1	0.09195
YP_613049.1	0.02331	ZP_05742946.1	0.00259	YP_167495.1	0.01189
ZP_05787317.1	0.05067	ZP_05124055.1	0.00479	ZP_05077096.1	0.02243
ZP_05090152.1	0.02135	ZP_02144078.1	1.50E-04	ZP_02150089.1	0.00525
ZP_01057317.1	0.03895	ZP_01755057.1	0.02208	ZP_00958385.1	0.11454
ZP_01741243.1	0.08607	ZP_01004664.1	0.16268	YP_001533517.1	0.12878
ZP_05075472.1	0.06235	ZP_01001466.1	0.11281	ZP_05844994.1	0.09085
ZP_01902406.1	0.10872	ZP_01035445.1	0.02544	ZP_01878745.1	0.01823

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ZP_01012755.1	0.11596	YP_001167277.1	0.10524	YP_002525140.1	0
YP_001043008.1	0	YP_352524.1	0.0033	YP_002289344.1	0.12091
YP_782217.1	0.09644	YP_486085.1	0.03763	NP_948411.1	0.01899
YP_001992458.1	0.00366	ZP_06357863.1	0.01053	YP_532175.1	0.20525
YP_570104.1	0.05754	ZP_05115779.1	0.12411	ZP_01545555.1	0.15802
ZP_06865428.1	0.10052	YP_002361225.1	0.08827	YP_001833399.1	0.14429
YP_001418020.1	0.06137	YP_001527231.1	0.07722	YP_001414618.1	0.21104
ZP_06349057.1	0.14368	ZP_06886293.1	0.16351	ZP_05375659.1	0.18787
YP_001754577.1	0.11316	YP_002498039.1	0.0129	YP_001770037.1	0.0419
YP_001638045.1	0.04189	YP_002961604.1	1.50E-04	YP_001923243.1	0.02151
NP_770725.1	0.32808	YP_001239802.1	0.01163	YP_577603.1	0.01372
ZP_01047312.1	1.50E-04	YP_318299.1	0.03645	YP_001205339.1	0.04688
YP_988814.1	0.181	YP_002971617.1	0.01061	YP_001609224.1	0.01393
pdb3E60A	0	YP_033372.1	0	YP_032135.1	0.02996
YP_001369133.1	0.02039	NP_540390.1	0	pdb3KZUA	0
YP_001627145.1	0.00354	NP_697489.1	1.40E-04	ZP_05450760.1	0.00353
ZP_05165638.1	0.00707	ZP_05180446.1	0.01778	YP_001258478.1	0.00354
ZP_05462539.1	0.08957	YP_468975.1	0.01591	YP_002975036.1	0.00473
YP_767164.1	1.50E-04	YP_001977669.1	0.00513	YP_002280579.1	1.50E-04
YP_002825436.1	0.02503	NP_385250.1	0.01084	YP_001326438.1	0.02947
ZP_02166210.1	0.12338	YP_002543974.1	0.05724	NP_354118.2	0.0475
ZP_04679658.1	0.14316	YP_002549100.1	0.08527	YP_674325.1	0.10302
NP_108086.1	0.00391	ZP_05813138.1	0.00625	YP_003064946.1	0.43804
ZP_01437696.1	0.16578	ZP_05086820.1	0.18417	ZP_01227403.1	0.18804
YP_003060318.1	0.28061	YP_001684145.1	0.05805	YP_003593381.1	0.03441
NP_420488.1	0.03347	ZP_06171018.1	0.09242	ZP_05033285.1	0.19621
YP_002130400.1	0.15685	ZP_04770962.1	0.24083	ZP_04759833.1	0.19148
YP_001260599.1	0.09469	YP_003545054.1	0.15116	ZP_01303441.1	0.02267
ZP_06862768.1	0.24424	ZP_01039234.1	0.09707	YP_496618.1	0.08762
YP_457687.1	0.14062	ZP_01865176.1	0.04421	YP_615337.1	0.17287
YP_001234655.1	0.13938	YP_746029.1	0.20196	YP_192434.1	0.19263
ZP_06895049.1	0.14502	YP_003187700.1	0.13943	YP_002277749.1	0
YP_001603174.1	0	ZP_06833913.1	0.08213	ZP_01018102.1	0.41767
YP_003550965.1	0.36322	ZP_02191471.1	0.16472	YP_002297785.1	0.28153
XP_002118651.1	0.31334	YP_001499736.1	1.60E-04	YP_002845626.1	0.00524
YP_001495263.1	0	NP_360823.1	0	YP_247240.1	0.0053
YP_001493932.1	0.01574	ZP_04698465.1	0.05436	ZP_06034564.1	0.07394
YP_001492682.1	0.03941	YP_001496807.1	0.0242	YP_537284.1	0.00582
YP_067689.1	0.05635	NP_221116.1	0.02928	YP_001248311.1	0.03576
YP_001937729.1	0.02864	YP_506338.1	0.03283	YP_003081648.1	0.0081
YP_180084.1	0	YP_196139.1	0	YP_302865.1	0.06478
ZP_00544971.1	0.07239	YP_198569.1	0.07279	YP_001975519.1	0.32167
CAL29454.1	0.11965	NP_966906.1	0	ZP_01314858.1	0

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ZP_03788216.1	0.01068	ZP_00374013.1	0.00532	YP_505503.1	0.37823
YP_003328772.1	0.07751	ZP_05277002.1	1.50E-04	YP_153675.1	1.50E-04
ZP_05277908.1	0.01188	ZP_05117149.1	0.207	ZP_01545048.1	0.08846
ZP_05083800.1	0.40781	YP_001116448.1	0.04719	ZP_02888316.1	0.01683
ZP_02905630.1	1.40E-04	ZP_02186266.1	0.26731	YP_986679.1	0.05985
YP_003279171.1	0.03177	ZP_03542755.1	0.05112	ADI30431.1	0.34544
ZP_06189504.1	0.01613	ZP_06641007.1	0.07337	YP_001477981.1	0.01565
YP_001005869.1	1.60E-04	ZP_04629915.1	0.0167	ZP_04639397.1	0.01678
ZP_04624336.1	1.40E-04	YP_001401512.1	0.0569	YP_001871983.1	0.00552
ZP_02335673.1	0	YP_001721366.1	0	NP_670045.1	0
YP_069980.1	0	ZP_04636000.1	0.04044	ZP_04633071.1	0.00609
ZP_04611239.1	0.02246	YP_001545138.1	0.22225	ZP_06209461.1	0.11331
XP_002339140.1	1.50E-04	YP_001566690.1	0.00371	YP_372676.1	0.11304
ZP_03267203.1	0.0745	ZP_02376504.1	0.19398	YP_002763044.1	0.35714
YP_001601372.1	0.08156	YP_002275395.1	0.09885	YP_001833651.1	0.18979
ZP_03521437.1	0.05533	YP_002281268.1	0.02344	YP_002975762.1	0.0109
YP_469631.1	0.02086	YP_001978308.1	0.0157	YP_002544532.1	0.10091
YP_002823076.1	0.09975	YP_002822705.1	0.03026	YP_002541394.1	0.05304
NP_356438.2	0.10928	YP_002495122.1	0.21356	NP_104074.1	0.11002
ZP_05813399.1	0.10696	YP_524379.1	0.30155	YP_767999.1	0.14942
NP_769169.1	0.23311	YP_002289462.1	0.2001	YP_002872684.1	0.17053
YP_260538.1	0.0497	ZP_04933060.1	0.00835	YP_791866.1	0.00556
YP_002441395.1	1.60E-04	ZP_06879728.1	0.00556	NP_250064.1	0
ZP_01364736.1	0	YP_001352609.1	0.11807	YP_001352710.1	0.07061
YP_002893188.1	0.15255	YP_003005620.1	0.1016	ZP_05726883.1	0.10392
YP_002238424.1	0.01589	YP_003439457.1	0.07353	YP_002919547.1	0.00555
YP_001335438.1	1.40E-04	YP_003332985.1	0.04289	NP_745446.2	0.13243
AAN68910.1	1.60E-04	YP_001267744.1	0.01714	YP_051019.1	0.17168
YP_349766.1	0.13959	CAI36078.1	0.27618	YP_574955.1	0.32254
YP_001338909.1	0.14586	ZP_01076878.1	0.17989		

KS3 Group 3H

Sequence	Distance	Sequence	Distance	Sequence	Distance
XP_001749342.1	0.63095	XP_002178506.1	0.39885	XP_002291090.1	0.84571
CAL52563.1	0.19334	XP_001416300.1	0.14086	XP_002505334.1	0.43156
EEH55341.1	0.17167	XP_001016781.1	0.26312	XP_001457159.1	0.54497
XP_002674325.1	0.6943	XP_001568067.1	0.07692	XP_001468331.1	0.02104
XP_001686034.1	0.04618	CBH09473.1	1.50E-04	XP_951607.1	0.03346
XP_813530.1	0.01986	XP_813186.1	0.04272	XP_001898667.1	0.76763
ADD38652.1	0.04538	ADD24355.1	0.00893	ADD18856.1	0.2195
XP_001953046.1	0.03503	NP_649565.1	0	AAN71524.1	0
AAL28297.1	1.40E-04	XP_002038454.1	0.03255	XP_002137354.1	0.04472
XP_002013894.1	0.01745	XP_002070764.1	0.03366	XP_002056186.1	0.04898
XP_001998915.1	0.02237	XP_002102255.1	0.00853	XP_002098053.1	0.02161
XP_001978968.1	0.01782	XP_001990179.1	0.08807	XP_001947839.1	0.52627
XP_002427048.1	0.34348	XP_001604643.1	0.25134	XP_397097.2	0.23716
XP_312104.4	0.12011	XP_001845950.1	0.17265	XP_973516.1	0.3106
XP_001654737.1	0.17414	XP_001629352.1	0.50025	XP_002110032.1	0.40464
XP_001768881.1	0.1925	NP_178533.2	0.09302	AAD25826.1	0
pdb1W0IA	0	XP_002528950.1	0.05132	XP_002302852.1	0.04679
XP_002277197.1	0.1105	EEE56501.1	0	EEC72679.1	0
ACN35500.1	0.01893	NP_001141987.1	1.40E-04	XP_002453478.1	0.11821
EEY57732.1	0.44926	EFA78466.1	0.23122	XP_643787.1	0.31146
XP_002160655.1	0.59816	XP_002611606.1	0.32607	XP_002131374.1	0.43139
XP_001924257.1	0.35081	DAA14416.1	0	NP_001069092.1	0
EFB16828.1	0.13428	XP_002759712.1	0.08953	XP_001091681.1	0.01635
XP_001164637.1	0.00435	XP_534240.1	0.09584	XP_002716272.1	0.09388
XP_001380871.1	0.14475	AAI18052.1	0	NP_081971.1	0
XP_001493918.1	0.10203	EDL20640.1	0.00843	pdb2C9HA	1.40E-04
NP_060367.1	0	pdb2IWYA	0	NP_001093978.1	0.32749
XP_418755.2	0.06282	XP_002195107.1	0.09075	CAG11668.1	0.22185
XP_693069.4	0.15647	AAI39556.1	0.06115	NP_001072543.1	0.39974
XP_002412164.1	0.53625	XP_002731411.1	0.39258	XP_782586.2	0.09468
XP_794160.2	1.70E-04	XP_001203492.1	0.01585	XP_795756.2	0.01932



KS3 Group 3I

Sequence	Distance	Sequence	Distance	Sequence	Distance
XP_002493945.1	0.32608	XP_452566.1	0.83912	NP_984024.1	0.39613
XP_002551645.1	0.23971	XP_001644339.1	0.32248	spP39525.1	0.32443
EDN63035.1	0.03208	EDZ72601.1	0.00628	NP_010983.1	0.09356
XP_002496001.1	0.36965	XP_447833.1	0.39034	XP_002618490.1	0.58331
XP_457553.2	0.22806	XP_001386421.2	0.22901	XP_001526300.1	0.22255
XP_002548234.1	0.17829	XP_723188.1	1.60E-04	EEQ44547.1	0.00512
XP_002419413.1	0.02042	XP_001486153.1	0.00662	EDK37726.2	0.00634
XP_506061.1	0.42153	XP_002838530.1	0.26668	XP_002621417.1	0.04597
EEH49288.1	0.10083	EEH22531.1	1.60E-04	XP_002795522.1	0.00355
EEH07635.1	1.40E-04	XP_001537873.1	0.00387	XP_001247018.1	1.50E-04
EER24144.1	0.06508	EFE29279.1	0.10123	XP_002848012.1	0.07564
XP_680758.1	0.09242	XP_001215943.1	0.18786	XP_749705.2	8.50E-04
XP_001260198.1	0.00657	XP_002478904.1	0.08358	XP_002146596.1	0.12817
XP_001275256.1	0.05883	XP_002382186.1	0.13563	EDP54227.1	0.02303
XP_001400553.1	0.09429	XP_002564915.1	0.24174	XP_001908317.1	0.2199
AAB81078.1	0.0766	XP_955799.1	1.60E-04	CBI51959.1	0.03974
XP_365982.2	0.30076	EEY22638.1	0.32117	EEU46146.1	0.16274
XP_387402.1	0.12842	XP_001550504.1	0.01804	XP_001590028.1	0.11964
XP_001940043.1	0.37714	NP_596487.1	0.354	XP_002173178.1	0.35783
XP_002639233.1	0.06764	NP_001021098.1	0.01719	NP_001021097.1	1.40E-04
XP_002572381.1	1.17464	ZP_01312503.1	0.57827	YP_003395948.1	0.48109
YP_220208.1	0.01581	YP_515080.1	0.01037	NP_829716.1	0.00511
NP_296530.1	0.00979	YP_001654230.1	0.0052	YP_328598.1	0.00518
YP_002888394.1	0	NP_220289.1	0	ACZ32804.1	0.00568
NP_225111.1	0.00607				

KS3 Group 3I

Sequence	Distance	Sequence	Distance	Sequence	Distance
XP_002493945.1	0.32608	XP_452566.1	0.83912	NP_984024.1	0.39613
XP_002551645.1	0.23971	XP_001644339.1	0.32248	spP39525.1	0.32443
EDN63035.1	0.03208	EDZ72601.1	0.00628	NP_010983.1	0.09356
XP_002496001.1	0.36965	XP_447833.1	0.39034	XP_002618490.1	0.58331
XP_457553.2	0.22806	XP_001386421.2	0.22901	XP_001526300.1	0.22255
XP_002548234.1	0.17829	XP_723188.1	1.60E-04	EEQ44547.1	0.00512
XP_002419413.1	0.02042	XP_001486153.1	0.00662	EDK37726.2	0.00634
XP_506061.1	0.42153	XP_002838530.1	0.26668	XP_002621417.1	0.04597
EEH49288.1	0.10083	EEH22531.1	1.60E-04	XP_002795522.1	0.00355
EEH07635.1	1.40E-04	XP_001537873.1	0.00387	XP_001247018.1	1.50E-04
EER24144.1	0.06508	EFE29279.1	0.10123	XP_002848012.1	0.07564
XP_680758.1	0.09242	XP_001215943.1	0.18786	XP_749705.2	8.50E-04
XP_001260198.1	0.00657	XP_002478904.1	0.08358	XP_002146596.1	0.12817
XP_001275256.1	0.05883	XP_002382186.1	0.13563	EDP54227.1	0.02303
XP_001400553.1	0.09429	XP_002564915.1	0.24174	XP_001908317.1	0.2199
AAB81078.1	0.0766	XP_955799.1	1.60E-04	CBI51959.1	0.03974
XP_365982.2	0.30076	EEY22638.1	0.32117	EEU46146.1	0.16274
XP_387402.1	0.12842	XP_001550504.1	0.01804	XP_001590028.1	0.11964
XP_001940043.1	0.37714	NP_596487.1	0.354	XP_002173178.1	0.35783
XP_002639233.1	0.06764	NP_001021098.1	0.01719	NP_001021097.1	1.40E-04
XP_002572381.1	1.17464	ZP_01312503.1	0.57827	YP_003395948.1	0.48109
YP_220208.1	0.01581	YP_515080.1	0.01037	NP_829716.1	0.00511
NP_296530.1	0.00979	YP_001654230.1	0.0052	YP_328598.1	0.00518
YP_002888394.1	0	NP_220289.1	0	ACZ32804.1	0.00568
NP_225111.1	0.00607				

KS3 Group 3J

Sequence	Distance	Sequence	Distance	Sequence	Distance
XP_002509140.1	0.17327	EEH54246.1	0.05952	XP_002463312.1	0.3231
CAL52269.1	0.10638	XP_001416469.1	0.03303	XP_002504288.1	0.26638
EEH56019.1	0.09824	ABR18442.1	0.15698	spP23902.1	0.11326
EAZ30871.1	0	CAD40964.2	0	NP_001052904.1	0
BAH00228.1	0	CAH67240.1	1.40E-04	EAY94286.1	0.00363
EAZ00014.1	0	NP_001057053.1	0	AAC49118.1	0.01064
NP_199441.1	1.40E-04	ABA07910.1	0.05287	XP_002316735.1	0.01616
XP_002305334.1	0.02151	ABJ90468.1	0.02678	XP_002519707.1	0.01569
AAC04691.1	0.05964	ABM53471.1	0.05021	XP_002272874.1	0
CAN70157.1	0	CBI30851.1	0	XP_001762048.1	1.50E-04
XP_001776124.1	0.00701	XP_001762687.1	0.17097	NP_001152921.1	0.08248
NP_001149639.1	0.01062	NP_001146139.1	0.01085	XP_002438009.1	0.01534
AAF61730.1	0.00471	AAF61731.1	1.60E-04	ADE76842.1	0.1715
AAK58535.1	0.26861	ACU19800.1	0.11645	AAC78479.1	0.20469
XP_002265207.1	0	CBI34509.1	0	XP_002518849.1	0.0477
XP_002299456.1	0.04152	XP_002303661.1	0.01082	XP_001768920.1	0.06238
XP_001763306.1	0.02542	XP_001773138.1	0.02216	XP_001768994.1	0.10126
ADE77460.1	0.10305	XP_002272201.1	0	CBI35831.1	0
CAN69528.1	1.40E-04	ACJ85772.1	0.07324	XP_002326139.1	0.0945
XP_002324139.1	0.03415	ABJ90469.1	0.0549	XP_002516228.1	0
AAA33872.1	0	AAW88762.1	0.00586	AAF61737.1	0.02399
AAW88763.1	1.40E-04	CBI27767.1	0	XP_002276214.1	0
CAN81160.1	0.09405	AAC04692.1	0.05227	ABI18155.1	0.11349
AAX54528.1	0.09212	AAF91318.1	0.12607	AAF61739.1	0.03114
NP_565097.1	1.40E-04	AAL91174.1	0.00576	AAD55280.1	1.40E-04
AAC68860.1	0.04141	AAC68861.1	0.04413	AAB37270.1	0.02636
AAB37271.1	0.01449	CAC59946.1	0.01454	ACN85392.1	0.09235
CAA84023.1	0.10424	EEE59220.1	1.40E-04	EEC75431.1	0.07594
NP_001169617.1	0.03132	EAZ42784.1	0	NP_001060274.1	0
EAZ04708.1	0	NP_001132041.1	0	ACG25173.1	0
XP_002463181.1	1.40E-04	CAA84022.1	0.01028	ACQ41833.1	0.09991
AAF26738.2	0.03084	XP_001700152.1	0.22789	CAL57571.1	0.18009
XP_001421280.1	0.00284	XP_001421246.1	1.40E-04	XP_002505037.1	0.1425
EEH55347.1	0.32112				

KS3 Group 3K

Sequence	Distance	Sequence	Distance	Sequence	Distance
YP_008237.1	0.23714	ZP_06299044.1	0.23668	YP_003251132.1	0.64945
AAQ83492.1	0.01785	YP_002722797.1	2.20E-04	AAQ82571.1	0.00271
YP_003634932.1	1.40E-04	NP_787379.1	0.15981	NP_789448.1	0.00662
NP_931374.1	1.07375	ZP_05733323.1	0.35421	ZP_06291830.1	0.91235
YP_002940685.1	0.41803	YP_003251090.1	0.64415	ZP_05622183.1	0.17253
NP_970655.1	0.31837	YP_002761147.1	0.45344	ZP_03133348.1	0.40844
ADD93463.1	0.24009	ZP_03632613.1	0.25657	YP_001877932.1	0.26479
ZP_02928386.1	0.42196	ZP_01909711.1	0.60175	ZP_05135193.1	1.40E-04
YP_002027262.1	0.01792	YP_001970907.1	1.40E-04	YP_001776182.1	0.03441
NP_297963.1	0.00729	NP_779695.1	0.01022	ZP_00680880.1	0.00676
ZP_00650790.1	1.40E-04	YP_003375135.1	0.13935	NP_636396.1	0.01587
YP_362879.1	1.30E-04	NP_641466.1	1.40E-04	ZP_06731766.1	1.40E-04
ZP_06706528.1	0.00339	YP_001915487.1	0	YP_199522.1	0
ZP_02242174.1	0	YP_449837.1	0	ZP_06485693.1	0
ZP_06490213.1	0	YP_003460502.1	0.35848	YP_002513901.1	0.14917
EEZ80338.1	0.02788	YP_903789.1	0.13792	YP_001219364.1	0.19425
ZP_01126078.1	0.44413	YP_114431.1	0.21093	YP_003528558.1	0.07458
YP_343665.1	0.01189	ZP_05047761.1	0.06729	YP_001982157.1	0.17306
YP_003073241.1	0.206	YP_527105.1	0.29164	ZP_05126462.1	0.07351
XP_002171257.1	0.01651	ZP_01102857.1	1.50E-04	ZP_05096884.1	0.24075
ZP_01625412.1	0.1838	ZP_04958392.1	0.11833	ZP_01618223.1	0.20934
ZP_02062374.1	0.32148	ZP_01306141.1	0.33882	YP_927853.1	0.13456
NP_718355.1	1.40E-04	YP_738506.1	0.07419	YP_963816.1	0.06528
ZP_01707713.1	0.02917	YP_750190.1	0.08892	YP_001365924.1	0.00437
YP_001050099.1	1.20E-04	YP_870190.1	0.07212	YP_734522.1	0.12876
YP_003557290.1	0.07622	YP_563294.1	0.14124	YP_002312347.1	0.07662
YP_001760423.1	0.03295	YP_001474357.1	0.0538	YP_001674003.1	0.02034
YP_001502347.1	0.01491	YP_001093731.1	0.14422	ABO25839.1	0.08129
ZP_02960982.2	0.06051	ZP_06123439.2	0.06904	ZP_03320935.1	0.03823
ZP_05973686.2	0.01496	NP_930065.1	0.10289	YP_003468743.1	0.10786
YP_003040542.1	0.07975	YP_454742.1	0.16258	ZP_04619570.1	0.03897
ZP_04635494.1	1.50E-04	ZP_04632899.1	0.00864	ZP_04639480.1	0.00963
ZP_04627784.1	0.01433	NP_669077.1	0	YP_001400557.1	0
ACY62806.1	0	YP_003568260.1	0	ZP_02334966.1	0.01744
ZP_04611172.1	1.50E-04	YP_003018068.1	0.15153	ZP_03830877.1	0.00926
YP_003260166.1	1.50E-04	YP_049899.1	0.01397	ZP_03825337.1	0.01094
ZP_06640849.1	0.03104	YP_001907949.1	0.04366	YP_003530834.1	0.07985
ZP_04615742.1	0.09323	ZP_05728387.1	0.04616	YP_003210037.1	0.01487
YP_001438334.1	0.02496	YP_001176340.1	0.03006	ZP_06550175.1	0
YP_002239286.1	0	YP_001334756.1	0.00498	YP_003364749.1	0.00507
ZP_06353351.2	0.02521	ZP_04561508.1	0.01917	ABX21687.1	0.01045
YP_001570829.2	1.60E-04	NP_460167.1	0.00988	YP_002142377.1	0

KS3 Group 3K

YP_002114196.1	0	YP_002638096.1	0	ZP_03164106.1	0
ZP_03364350.1	0	ZP_03346304.1	0	NP_455690.1	0
YP_001453526.2	1.40E-04	ABV13090.1	1.50E-04	YP_002382969.1	0.02038
ZP_02902779.1	0.03693	YP_408386.1	0	YP_001457939.1	0
YP_001880735.1	0	pdb2GFYA	0.00474	pdb2GFVA	0.00457
pdb3HNZA	1.50E-04	YP_540234.1	0.00463	pdb2GFWA	0
pdb1B3NA	0	YP_310075.1	0	ABF03324.1	0
YP_403641.1	0	NP_287229.1	0	CBK85300.1	0.01017
YP_003613033.1	0.01313	ZP_05967254.1	0.01801	ZP_06189620.1	0.01391
YP_001478139.1	0.00455	YP_001005926.1	0.00595	ZP_04623165.1	0.02322
YP_003333159.1	0.10659	YP_003003957.1	0.03663	YP_002649150.1	0.07577
CAY74690.1	0.08157	YP_003519780.1	0.11591	YP_002987210.1	0.06236
YP_003296143.1	0.00713	YP_002933773.1	0.01529	ZP_06715161.1	0.09973
ZP_03806049.1	0.16349	ZP_03842102.1	0.08067	YP_002150620.1	1.40E-04
CBA72604.1	0.30127	YP_002923351.1	0.32942	ZP_06053854.1	0.16546
ZP_01870109.1	0.10477	YP_205121.1	0.10565	ZP_05924106.1	0.04543
ZP_01066867.1	0	ZP_01954149.1	0	NP_231653.1	1.60E-04
ZP_01957459.1	0	ZP_05885226.1	0.0696	AAO11333.1	0.13062
ZP_05891522.1	0.02062	YP_002263607.1	0.22741	ZP_01991511.1	0.00285
spP55338.2	0.05087	ZP_04923689.1	1.50E-04	ZP_06181416.1	0.00267
NP_798431.1	1.50E-04	ZP_06176392.1	1.50E-04	ZP_01988358.1	1.40E-04
ZP_01262470.1	1.40E-04	ZP_05945981.1	0.03215	NP_934070.1	0.04149
YP_001446086.1	1.40E-04	ZP_01816115.1	0.05598	ZP_05716250.1	0.01233
ZP_05882061.1	0.02388	ZP_04413434.1	0.00571	ZP_01950453.1	1.40E-04
ZP_04418352.1	0.00568	ZP_06154962.1	0.06183	ZP_01234892.1	0.04264
ZP_04411348.1	0.00284	ZP_01221254.1	0.06847	YP_269019.1	0.29642
YP_129410.1	0.01918	BAA85258.1	0.08401	ZP_01134231.1	0.19164
ZP_01900212.1	0.14549	ZP_01612356.1	0.08093	YP_661692.1	0.07291
YP_340321.1	0.04111	YP_002126623.1	0.05226	ZP_05620362.1	0.21158
ZP_04717193.1	0.00937	YP_001279117.1	0.21826	YP_265253.1	0.03592
YP_003627995.1	0.2101	YP_003146377.1	0.28878	ZP_04755718.1	0
YP_581532.1	0.00955	YP_001891409.1	0.00336	AAW49905.1	0
YP_001678073.1	0	ZP_03666052.1	1.40E-04	YP_513823.1	1.40E-04
YP_170326.1	0	ZP_01215082.1	0.131	YP_002893375.1	0.11834
YP_942529.1	0.16973	YP_001141867.1	0.03136	ZP_01946511.1	0.03968
YP_856777.1	0.02227	YP_095426.1	1.50E-04	YP_126698.1	0.00512
NP_819531.1	0.04789	YP_123676.1	0	ZP_05111858.1	0.0731
YP_001250135.1	0	ZP_06185391.1	0	ZP_01114378.1	0.22156
YP_003454957.1	0	YP_001340991.1	0.10588	YP_573655.1	0.27199
ZP_01078567.1	0.1032	ZP_01366433.1	0	ZP_04934996.1	0
ZP_01168464.1	0.23204	YP_001347568.1	0.13138	NP_251655.1	0.0148
ZP_04929263.1	0	ABP80270.1	0	YP_001173112.2	0
YP_001187126.1	0.02839	NP_793603.1	1.40E-04	ZP_03397918.1	0.00354

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ZP_04588810.1	0.00716	YP_273886.1	0.00352	ZP_06480692.1	1.40E-04
YP_234735.1	1.40E-04	YP_001269106.2	0	ABQ79922.1	0
ZP_06457492.1	0.00351	NP_744070.1	1.40E-04	YP_607284.1	1.40E-04
YP_001667733.1	0.00329	YP_002874224.1	0.03354	YP_258918.1	0.02247
YP_001748401.1	0.01383	YP_002798684.1	0.06208	YP_959134.1	0.12348
YP_349883.3	0.01946	ZP_05293183.1	0.08217	YP_002220014.1	0.20221
ZP_01894498.1	0.14559	YP_002794570.1	0.32735	YP_411771.1	0.08038
ZP_01914714.1	0.16338	YP_746708.1	0.07349	ZP_05313980.1	0.23494
NP_841684.1	0.04435	YP_160133.1	0.17575	NP_881067.1	0.07215
YP_003166784.1	0.17095	YP_785646.1	0.0321	YP_001630365.1	0.12193
ZP_06686419.1	0.1213	ZP_06734803.1	0.02855	ZP_05319919.1	0.00831
ZP_05984038.2	0.04441	ZP_04757034.1	0.00646	ZP_06864686.1	0.03421
ZP_05977573.1	0.00419	NP_273276.1	0.0409	ZP_06568606.1	1.50E-04
ZP_05982684.1	0.02083	ZP_05987060.1	0.01089	ZP_03718751.1	0.07713
YP_208796.1	1.40E-04	ZP_06754021.1	0.30917	ZP_04603038.1	0.21952
YP_974338.1	0.00712	NP_903082.1	0.08441	ZP_03699482.1	0.04666
ZP_03714906.1	0.14996	ZP_04578180.1	0.34408	YP_002355959.1	0.32062
ZP_04575983.1	0.08206	ADI29722.1	0.10909	YP_001353050.1	1.50E-04
YP_545612.1	0.18068	YP_002910839.1	0.0547	YP_001896526.1	1.50E-04
YP_001100338.1	0.10066	ZP_06841075.1	0.00544	YP_001857067.1	0.053
YP_559922.1	1.40E-04	ZP_06464841.1	1.50E-04	ZP_06293389.1	1.40E-04
ZP_02886558.1	0.01079	ZP_02356453.1	0	ZP_02464241.1	0.04011
ZP_02363571.1	0	ZP_03266076.1	0.0105	YP_442256.1	1.40E-04
YP_003605709.1	0.00545	ZP_02472174.1	0	YP_109030.1	0
ZP_02374016.1	1.40E-04	YP_001797301.1	0.0805	YP_002980956.1	0.00682
YP_001155186.1	0.11268	ZP_03574381.1	0.00335	YP_001580361.1	1.40E-04
YP_001898501.1	0.01683	YP_002230150.1	1.50E-04	ZP_04939241.1	0.00359
YP_368478.1	0.01339	YP_001764382.1	0	ZP_02891248.1	0.01083
YP_620528.1	0	YP_772894.1	0.00355	YP_001118890.1	0.007
YP_001807712.1	0.00355	ZP_02379010.1	0.02004	ZP_04946172.1	0.01191
ZP_02908570.1	0.00874	YP_002006069.1	0.00641	YP_296468.1	0.00882
YP_727016.1	0.0141	ZP_00945474.1	0	YP_002255620.1	0
YP_584572.1	0.05925	YP_001789647.1	0.21864	CAZ89389.1	0.03546
NP_519175.1	0.01424	YP_001019837.1	0.13156	YP_002943310.1	0.19874
YP_003644067.1	0.17796	YP_550447.1	0.11371	ZP_03544801.1	0.00451
YP_983290.1	0.04813	YP_001566282.1	0.10796	YP_997996.1	0.0757
YP_003277016.1	1.40E-04	YP_002554064.1	0	YP_987475.1	0
ZP_04761887.1	0.09519	YP_969553.1	0.00972	YP_522994.1	0.34856
ZP_06209764.1	0.01329	YP_003051156.1	0.083	YP_003048574.1	0.12782
XP_002162711.1	0.11181	ZP_01552236.1	0.20235	ZP_05081635.1	0.13269
ZP_04830674.1	0.18964	YP_315305.1	0.17037	YP_933131.1	0.21731
YP_285234.1	0.19861	ZP_05103000.1	0.23451	YP_390984.1	0.25836
YP_003524155.1	0.34668	ZP_05705509.1	0.1091	YP_742258.1	0.26364

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YP_001210094.1	0.21714	YP_003263791.1	0.28978	YP_692791.1	0.02587
YP_001001600.1	0.39782	YP_003443845.1	0.30937	ZP_05061779.1	0.44507
ZP_05043240.1	0.02882	YP_632930.1	0.10059	ZP_01460729.1	0.4461
ZP_01464368.1	0.10074	ZP_01312314.1	0.17315	YP_356856.1	0.16442
YP_003270019.1	0.53621	YP_002538067.1	0.06003	YP_001230642.1	0.0216
NP_952656.1	0.09439	ZP_05309398.1	0.02306	YP_002139902.1	1.50E-04
YP_001952170.1	0.13803	YP_901416.1	0.20761	YP_384560.1	0.27189
YP_003020977.1	0.0098	CBA08104.1	0.62439	ZP_03494621.1	0.97635

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Sequence	Distance	Sequence	Distance	Sequence	Distance
YP_002754850.1	0.48182	YP_001819409.1	0.73185	EES52670.1	0.37503
EDZ40293.1	0.04129	EAY56576.1	0.04133	YP_003120062.1	0.4922
ZP_03854179.1	0.29808	YP_003124602.1	0.2515	ZP_01718081.1	0.41248
YP_003119859.1	0.34626	ZP_01690302.1	0.43561	ZP_01693246.1	0.60494
YP_678196.1	0.32259	YP_679453.1	0.24683	YP_001196640.1	0.56519
ZP_04781063.1	0.11274	ZP_03966714.1	0.23333	ZP_01886871.1	0.32363
YP_003087233.1	0.23647	YP_003091886.1	0.22737	ZP_02424595.1	0.35709
CBK63778.1	0.17495	ZP_01720559.1	0.17479	YP_003088284.1	0.22227
YP_003389920.1	0.23661	YP_001958264.1	0.41273	ZP_03700728.1	0.18356
YP_003194515.1	0.07891	ZP_00949579.1	0.08904	ZP_01890689.1	0.05128
ZP_01049658.1	0.04215	ZP_01062022.1	0.04434	ZP_02161751.1	0.18265
ZP_04057022.1	0.31784	ZP_01252508.1	0.09217	ZP_01053253.1	0.05382
ZP_02181251.1	0.22134	ZP_01105845.1	0.1172	YP_863390.1	0.08906
YP_003582835.1	0.07754	ZP_01201455.1	0.13048	ZP_01733616.1	0.10963
YP_001295137.1	0.06635	YP_001193490.1	0.06918	ZP_01117143.1	0.11082
YP_003096786.1	0.04992	ZP_03851250.1	0.06164	XP_001617649.1	0.22403
ZP_03702479.1	0.1668	YP_003141427.1	0.02823	ZP_03391722.1	0.03542
ZP_03968785.1	0.1205	YP_003094446.1	0.06732	ZP_01884445.1	0.12849
YP_678008.1	0.29965	ZP_01688991.1	0.12108	NP_905866.1	0.15104
ZP_04389105.1	0.25379	ZP_04055530.1	0.13519	YP_002308870.1	0.37564
YP_001304162.1	0.02263	ZP_02032793.1	0.00674	ZP_03475111.1	0.00291
ZP_01959937.1	0.01146	ZP_04550949.1	1.40E-04	ZP_02064985.1	0.00274
ZP_05758919.1	0.00276	ZP_02069579.1	0.00775	ZP_02436222.1	0.02364
ZP_03460597.1	0.02171	ZP_03013826.1	0.00651	ZP_03677269.1	0.01989
CBK67700.1	0.04699	ZP_05416579.1	0.02331	ZP_04547219.1	1.60E-04
NP_812270.1	0.03902	YP_097502.1	0	YP_209917.1	0
ZP_05282327.1	0.04018	ZP_05735745.2	0.31757	YP_001298363.1	0.00669
ZP_06743022.1	0	ZP_03300403.1	0	ZP_03207944.1	0.04903
ZP_03011059.1	0.0648	ZP_03643892.1	0.00618	YP_003575810.1	0.17098
ZP_06289954.1	0.11989	ZP_06286096.1	0.10633	ZP_04832643.1	0.06788
ZP_05857440.1	0.06275	ZP_06255608.1	0.03636	ZP_06419836.1	0.05643
ZP_06405966.1	0.23684	ZP_06252653.1	0.06291	ZP_06005333.2	0.12662
ZP_06268087.1	0.09823	ZP_05917246.1	0.10434	YP_003543190.1	0.00587
YP_001597844.1	0.05688	YP_003257301.1	0.20752	YP_003283722.1	0.05789
YP_001996467.1	0.23377	YP_002014879.1	0.18819	YP_001958633.1	0.10135
YP_001997755.1	0.17533	NP_662992.1	0.11183	YP_001942243.1	0.09671
YP_379955.1	0.11033	YP_912906.1	0.1145	YP_374062.1	0.07278
YP_001129721.1	0.05571	YP_002017149.1	0.09734	ZP_01386934.1	0.0985
YP_446845.1	0.37127	YP_003291950.1	0.17756	YP_003572822.1	0
YP_446831.1	0	YP_003291812.1	0.24972	YP_001568082.1	0.51597
YP_001410126.1	0.32359	YP_002535318.1	0.04857	YP_001738169.1	0.01638
NP_228611.1	0.00656	YP_001243731.1	0.04926	YP_001470058.1	0.24438



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YP_002335564.1	0.20326	YP_001306814.1	0.17977	YP_074789.1	0.40417
NP_968865.1	0.44175	YP_001614453.1	0.41231	YP_001379920.1	0.1776
YP_465953.1	0.00701	YP_002135191.1	1.40E-04	YP_002493333.1	0.00697
CAJ72131.1	0.38582	ZP_02733622.1	0.37966	YP_003631134.1	0.11445
ZP_01852702.1	0.24903	ZP_01094080.1	0.12076	NP_867670.1	0.2986
YP_003370125.1	0.1601	YP_824804.1	0.31268	YP_822446.1	0.34582
YP_593580.1	0.29429	YP_002432466.1	0.3677	ZP_01288294.1	0.15723
ADH85979.1	0.32407	CBE68493.1	0.39388	YP_001113412.1	0.26399
YP_003640817.1	0.23547	YP_003238945.1	0.2505	YP_001740365.1	0.47761
ZP_03496533.1	0.10119	YP_143679.1	1.40E-04	YP_004020.1	0.00424
ADH64415.1	0	ZP_04034165.1	0	YP_003506462.1	0.23743
ADI15897.1	0.34388	YP_002785167.1	0.05864	YP_603909.1	0.08364
NP_295664.1	0.23062	ZP_01088867.1	0.50816	ZP_02735145.1	0.34445
NP_863838.1	0.26622	YP_003368802.1	0.43062	ZP_01089313.1	0.27732
YP_003630588.1	0.35539	ZP_01857436.1	0.56034	YP_066524.1	0.489
YP_002247955.1	0.2175	YP_460235.1	0.39115	YP_845501.1	0.33544
YP_002773104.1	0.26294	ZP_02328762.1	0.14622	ZP_04850828.1	0.14861
YP_003244275.1	0.15179	YP_003012208.1	0.22106	XP_002290056.1	0.15037
XP_002181453.1	0.16501	XP_002370161.1	0.42095	XP_724752.1	0.11494
XP_675741.1	0.18997	XP_001616272.1	0.09532	XP_002261412.1	0.20643
XP_966246.2	1.50E-04	AAK83688.1	1.40E-04	ZP_05056284.1	0.39502
YP_001820662.1	0.23522	ZP_03727666.1	0.31636	YP_003548507.1	0.37181
ZP_01876147.1	0.49148	YP_003309245.1	0.21403	ZP_06010976.1	0.17985
ZP_05901369.1	0.13585	YP_003164370.1	0.04838	ZP_05617725.1	0.0078
ZP_05626658.1	0.06414	ZP_05551805.1	0.00396	ZP_04571693.1	0.00628
ZP_04573982.1	0.00517	ZP_05815992.1	0.00323	ZP_05440891.1	1.40E-04
ZP_06870616.1	0.00339	NP_603058.1	0.00339	ZP_04969898.1	1.50E-04
ZP_06027743.1	0.00332	ZP_04571282.1	0.00679	ZP_06747375.1	0.00336
ZP_04568085.1	0.04492	ZP_05632952.1	0.02206	ZP_04859069.1	0.00907
YP_003323087.1	0.45805	YP_754517.1	0.39634	ADI02208.1	0.22873
YP_002508782.1	0.38451	YP_003192929.1	0.60778	YP_003495422.1	0.29073
ZP_03293193.1	0.27685	YP_001087677.1	0.018	ZP_05400597.1	0.04977
YP_360277.1	0.30021	YP_003589302.1	0.19768	YP_003184762.1	0.44581
ZP_01665630.1	0.16709	ZP_06560504.1	0.3291	YP_003311665.1	0.00901
ZP_04599935.1	0.01943	ZP_03989355.1	0.16593	YP_003399064.1	0.28537
ZP_05893555.1	0.20734	ZP_06603593.1	0.1112	ZP_04658666.1	0.07755
ZP_05897870.1	0.17405	YP_001814532.1	0.27702	YP_002887091.1	0.19039
ZP_06364036.1	0.43846	YP_003425376.1	0.23579	ZP_06363737.1	0.13472
ADH99049.1	0.25657	YP_176042.1	0.13523	NP_243748.1	0.09529
NP_692126.1	0.23851	ZP_04150226.1	0.0207	ZP_04216550.1	0.01602
YP_001374221.1	0.13634	ZP_04196307.1	1.60E-04	ZP_03238550.1	0
ZP_04185048.1	0	ZP_00239080.1	0	YP_002444623.1	0
ZP_04299489.1	0	NP_830960.1	0	ZP_04226742.1	1.40E-04

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YP_001643960.1	0.00941	ZP_04173469.1	0.00984	ZP_04089390.1	0.00489
ZP_04288233.1	0.0049	NP_843662.1	1.40E-04	NP_977615.1	0.00489
YP_002560007.1	0.23064	YP_301887.1	0.04177	ZP_04059006.1	0.03832
YP_253887.1	0.03119	ZP_04824823.1	1.40E-04	ZP_06613704.1	0
NP_764233.1	0	ZP_04818719.1	0.01732	ZP_03612826.1	0.02842
ZP_04677498.1	0.02959	YP_003472096.1	0.08627	YP_002633684.1	0.1117
spQ5TKS0.1	1.50E-04	CAQ49407.1	0.00552	YP_493586.1	0.00553
YP_416337.1	0.00546	YP_040369.1	0	NP_371508.1	0
NP_645683.1	0	pdb2GQDA	0	ZP_06323997.1	0
ZP_05686380.1	0.00551	YP_003281866.1	0.00552	ZP_04016882.1	0.00556
YP_001696952.1	0.22235	ZP_04443603.1	0.09126	NP_471636.1	0.0073
YP_003465414.1	0.01707	ZP_00233381.1	0.00341	NP_465725.1	0
ZP_05297623.1	0	ZP_05236017.1	0	ZP_00231477.1	0
YP_014824.1	0	YP_002349315.1	0.00683	YP_850415.1	0.00158
ZP_03225734.1	0.21132	YP_003561164.1	0.13185	ZP_01862222.1	0.12104
YP_001124810.1	1.40E-04	ZP_03146733.1	0.00343	YP_146658.1	0.00341
ZP_04392453.1	1.40E-04	YP_002948902.1	0.02512	ZP_05371367.1	0.03056
YP_002316483.1	0.13554	ZP_04430457.1	0.07627	ZP_01170974.1	0.09691
YP_078422.1	0.0504	YP_001486302.1	0	ZP_03053250.1	0
YP_001420729.1	0.0219	ZP_06875016.1	0.00718	BAI84686.1	0.00351
NP_389016.1	1.50E-04	ZP_06402851.1	0.50936	ZP_01452101.1	0.26996
YP_865786.1	0.43274	YP_001180390.1	0.06617	YP_002573032.1	0.09063
YP_001037359.1	0.25729	ZP_05495182.1	0.32835	YP_001311055.1	0.28255
YP_002505046.1	0.12564	ZP_05497506.1	0.09822	ZP_05336897.1	0.19878
NP_623088.1	0.05831	YP_003477102.1	0.03499	ADH61042.1	0.0345
YP_001665275.1	0.00561	YP_001663343.1	0.00915	YP_429809.1	0.45682
YP_002460266.1	0.00834	YP_518890.1	0.02377	AAN87389.1	0.14965
YP_001680735.1	0.14122	YP_001320563.1	0.22111	YP_001512997.1	0.3072
YP_001917533.1	0.51278	YP_002250662.1	0.08717	YP_002352840.1	0.04572
ZP_03734380.1	0.32918	YP_001716810.1	0.33827	YP_001212289.1	0.18229
YP_003190690.1	0.19383	YP_002730299.1	0.11875	YP_002728053.1	0.05301
YP_001931825.1	0.0144	ZP_04584081.1	0.01117	ZP_06462719.1	0.02908
YP_002121176.1	0.15055	YP_003431914.1	0.18789	ZP_02178615.1	0.17448
NP_214178.1	0.11367	YP_003472861.1	0.12048	YP_001939086.1	0.49937
ZP_06243415.1	0.45866	YP_003505719.1	0.6722	YP_001544358.1	0.4679
ACD50086.1	0.58316	ADD96099.1	0.61058	YP_003102529.1	0.65007
NP_149252.1	0.37443	YP_001698468.1	0.11936	ZP_01725299.1	0.08481
YP_003307114.1	0.37539	ZP_04443032.1	0.60049	YP_002773860.1	0.19727
YP_003013657.1	0.27316	ZP_02326180.1	0.13931	YP_001420224.1	0.16229
ZP_03056304.1	0.18045	YP_003565924.1	0.1021	ZP_04118205.1	0.06667
ZP_04155019.1	0.00774	ZP_04215528.1	0.02214	ZP_04850785.1	0.35604
YP_003240556.1	0.34133	YP_003142531.1	0.42494	ZP_04454323.1	0.30557
CBL14611.1	0.34428	ZP_02081245.1	0.28038	ZP_01772088.1	0.61768

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YP_003553909.1	0.18485	ZP_06393391.1	0.18277	ZP_06440084.1	0.26481
ZP_06265931.1	0.51376	ZP_05860123.1	0.31081	CBL28034.1	0.31231
YP_003317609.1	0.40074	ZP_02443330.1	0.44681	ZP_06470467.1	0.61591
ZP_03706016.1	0.37023	CBL35373.1	0.02235	ZP_02422789.1	0.03236
ZP_06720340.1	0.25128	CBL18348.1	0.33737	ZP_06142888.1	0.30048
ZP_03461733.1	0.27619	ZP_02027437.1	0.17438	ZP_03800905.1	0.0923
CBK81085.1	0.1383	ZP_03717142.1	0.28489	ZP_03168830.1	0.17189
CBL25725.1	0.13051	ZP_03289010.1	0.16217	ZP_02234907.1	0.14661
ZP_01994132.1	0.11187	ZP_01968409.1	0.22562	ZP_03778474.1	0.15051
ZP_02432065.1	0.11185	ZP_02040885.1	0.23189	ZP_01966099.1	0.02305
CBL21722.1	0.03157	ZP_03757156.1	0.11304	CBL19670.1	0.19972
ZP_05854014.1	0.23974	CBK89806.1	0.03496	YP_002939005.1	0.02674
ZP_06113826.1	0.13825	ZP_06346758.1	0.06684	CBK76059.1	0.00905
CBL41680.1	0.21358	ZP_02084300.1	0.14533	ZP_04666129.1	0.17052
ZP_02074863.1	0.24496	ZP_02206009.1	0.00592	CBK83617.1	0.15997
ZP_05344250.3	0.36855	ZP_04855818.1	0.19579	ZP_03782418.1	0.21903
YP_001557644.1	0.2891	ZP_02439874.1	0.18814	ZP_02420537.1	0.17185
ZP_03752404.1	0.21816	ZP_04742022.2	0.00572	CBL14355.1	1.40E-04
ZP_02074248.1	0.23164	ZP_02206151.1	0.02747	CBK83510.1	0.0652
ZP_05131827.1	0.40124	ZP_06425403.1	0.71535	ZP_02211332.1	0.333
ZP_04805320.1	0.1549	YP_698461.1	0.00977	ZP_02863451.1	1.50E-04
ZP_02640906.1	0	ZP_02634002.1	0	ZP_02953976.1	0
NP_561987.1	0	YP_695773.1	0.0048	ZP_02643084.1	0.08879
YP_001885349.1	0.11038	ZP_04823881.1	1.40E-04	YP_001920479.1	0.00334
YP_001308212.1	0.17723	ZP_02950240.1	0.19006	YP_001393525.1	0
YP_002470548.1	0	NP_780846.1	0.21448	ZP_05390941.1	0.27824
ZP_02993889.1	9.70E-04	YP_001256078.1	0.00557	YP_001788942.1	0.00497
ZP_02618342.1	0.03065	YP_001783235.1	0.01496	YP_001385911.1	0.00491
YP_001392954.1	1.50E-04	NP_350156.1	0.28995	ZP_04862000.1	0.22756
YP_877023.1	0.06905	ZP_02621963.1	0.03717	ZP_06884906.1	0.41416
ZP_02693053.1	0.33465	ZP_02868300.1	0.15356	ZP_02429443.1	0.24549
ZP_06620909.1	0.39472	ZP_06573121.1	0.50023	ZP_05792797.2	0.35239
CBK73670.1	0.30005	ZP_06597646.1	0.29256	ZP_03990115.1	0.12821
ZP_02038717.1	0.27672	ZP_05980407.2	0.19604	ZP_02092112.1	0.00511
CBL01769.1	1.50E-04	CBK99468.1	0.16852	ZP_05616243.1	0.0578
ZP_02094140.1	0.38953	ZP_02862884.1	0.20791	CBK87922.1	0.14832
ZP_06646270.1	0.24268	YP_002931157.1	0.28743	ZP_04453512.1	0.38644
ZP_03681418.1	0.44347	YP_001620459.1	0.72643	ZP_04449887.1	0.4033
ZP_06808099.1	0.32943	ZP_05577785.1	1.40E-04	ZP_04646521.1	0
NP_814075.1	0	ZP_04436497.1	0.0028	ZP_05421483.1	0.00281
ZP_05575115.1	1.40E-04	ZP_02185651.1	0.31758	ZP_05737017.1	0.19403
ZP_05851434.1	0.37409	ZP_05648820.1	0.06375	ZP_05645534.1	0.05094
ZP_05655161.1	0.01646	ZP_05575928.1	1.60E-04	ZP_05565104.1	0.00558

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ZP_04433522.1	1.40E-04	ZP_05574350.1	0	NP_816500.1	0
ZP_05473522.1	1.40E-04	CBL32387.1	0.00371	ZP_05568099.1	0.0037
ZP_04437737.1	0.00373	ZP_03949445.1	0.00369	ZP_05425365.1	1.40E-04
ZP_00603595.1	0.02103	ZP_05664931.1	0.00589	ZP_03980617.1	1.50E-04
ZP_05673272.1	0.05174	ZP_05678623.1	0.01756	ZP_05668246.1	1.60E-04
YP_001033056.1	0.12624	YP_808800.1	1.60E-04	NP_266931.1	0.05851
YP_819918.1	0.26477	ZP_06901134.1	0.06293	ZP_02919319.1	0.00472
YP_003429778.1	0.00502	ZP_04062531.1	0.01443	YP_138921.1	0.01183
NP_722066.1	0.09227	YP_002739785.1	0.00225	ZP_01828393.1	0.01188
ZP_06611561.1	0.21887	YP_001450969.1	0.08997	ZP_06199525.1	0.06596
ZP_01823334.1	1.40E-04	pdb2RJTA	0.00854	pdb2ALMA	0.00284
YP_003446781.1	0.05233	NP_357976.1	0	pdb1OX0A	0
NP_344945.1	0	YP_001035860.1	0.113	ZP_00787798.1	0.18271
NP_687383.1	0.03844	ZP_00790586.1	0.01162	ZP_00785927.1	1.60E-04
YP_002997513.1	0.02678	YP_603042.1	0.00584	YP_601113.1	0.00583
NP_665326.1	0.00584	YP_002562783.1	0.13132	YP_002122798.1	0.00568
YP_002745082.1	0.00579	YP_002745862.1	0.00291	YP_060801.1	0
YP_597222.1	0	NP_269771.1	0	ZP_03625942.1	0.13865
YP_001199168.1	0.13013	ZP_04783778.1	0.23939	ZP_03913260.1	0.00311
YP_817812.1	0.12391	YP_003621567.1	0.04672	YP_001727583.1	0.01612
ZP_03959921.1	0.1971	ZP_05744651.1	0.13715	ZP_04008326.1	0.14277
YP_535348.1	0.01855	ZP_06817776.1	0.09318	ZP_04010559.1	0.0674
ZP_01543875.1	0.09848	YP_811105.1	0.04986	YP_807306.1	0
YP_001988220.1	0	ZP_03963925.1	0	YP_003174801.1	0.07175
ZP_04441810.1	1.60E-04	YP_003171861.1	0	ZP_03210896.1	0
YP_001271585.1	0.06867	ZP_03974569.1	1.40E-04	ABO43826.1	0.00322
ZP_03956643.1	0.2564	ZP_06627954.1	0.12684	YP_618933.1	0.03862
YP_812866.1	0.04079	YP_001843130.1	0.14923	YP_804360.1	0.16777
ZP_06196566.1	0.11828	ZP_05752285.1	0.125	ZP_03953103.1	0.00617
ZP_03942975.1	0.00309	ZP_03940041.1	1.40E-04	ZP_04012975.1	0.02628
NP_785257.1	0	YP_003062992.1	0	YP_795097.1	0.17994
YP_395430.1	0.42357	ZP_06813000.1	0.33566	YP_003330292.1	0.04036
YP_181686.1	0.01468	YP_001214314.1	1.40E-04	YP_307969.1	0.0026
ZP_03736214.1	0.25944	YP_003156611.1	0.35411	YP_594537.1	0.45532
ZP_03310327.1	0.25675	YP_002480193.1	0.24938	YP_010423.1	0.25175
YP_388923.1	0.36091	YP_002437503.1	0.09467	ZP_06368570.1	0.06559
YP_002955375.1	0.07478	YP_003198282.1	0.26619	ZP_06233098.1	0.25606
YP_002990263.1	0.18914	ZP_01871119.1	0.26096	YP_002606717.1	0.12957
ZP_05626599.1	0.29342	ZP_00370611.1	0.09782	YP_002574900.1	0.09257
ZP_00367709.1	0.09379	YP_001398517.1	0.01586	ZP_06371788.1	0.03708
YP_001481993.1	1.60E-04	ZP_06373356.1	0.02116	ZP_01069885.1	0.03814
YP_178513.1	0.00384	ZP_01067458.1	0.00382	ZP_03222093.1	0.00386
YP_001405835.1	0.38114	YP_001359462.1	0.13768	YP_003304885.1	0.24817

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ZP_05071700.1	0.06196	ZP_03609170.1	0.04129	ZP_05363941.1	0.0243
YP_001467394.1	0.13681	YP_892506.1	1.60E-04	ZP_06009774.1	0.00343
YP_001490943.1	0.25149	YP_003654666.1	0.16236	ZP_04581790.1	0.25636
YP_001355786.1	0.24138	ZP_04583245.1	0.15543	ZP_03656759.1	0.01974
ZP_04808751.1	0.02131	NP_906860.1	0.27626	NP_860258.1	0.07419
ZP_03659023.1	0.1097	YP_002266145.1	0.00471	NP_207353.1	0.01057
ZP_03240344.1	1.50E-04	ZP_03437884.1	0.01071	YP_664568.1	0.01088
ZP_03438933.1	0.00532	NP_223223.1	0.00533	YP_001910282.1	0.00542
YP_003057554.1	0.01641	YP_002301199.1	0	ACX97966.1	0
YP_627277.1	0	ACX99377.1	0	YP_003516548.1	0.32976
YP_002522025.1	0.32397	YP_003319468.1	0.36454	YP_001430529.1	0.02299
YP_001278884.1	0.03675	YP_001634736.1	0.10811	YP_002463050.1	0.02899
YP_003321759.1	0.43262	YP_001431604.1	0.02811	YP_001277776.1	0.02519
ZP_02733103.1	0.81912	ZP_03999524.1	0.33114	YP_003405633.1	0.23749
YP_643859.1	0.8212	ZP_01084812.1	0.12725	YP_002049115.1	0.46021
ZP_05046053.1	0.22362	NP_895781.1	0.04036	ZP_01079056.1	0.08476
ZP_01471680.1	0.02842	YP_001223919.1	0.07973	NP_896237.1	0.07258
YP_376187.1	0.03757	ZP_01468915.1	0.0859	YP_001226387.1	0.19716
YP_380456.1	0.00947	ZP_05789772.1	0.00846	ZP_01123709.1	0.09522
YP_729368.1	0.08392	YP_001012111.1	0.05537	NP_893726.1	0.04746
YP_398199.1	0.03239	ZP_05139231.1	0	YP_001485082.1	0
YP_001010209.1	0.01739	YP_001092026.1	0.0115	YP_001551619.1	0.12442
NP_876160.1	0.11366	YP_001015881.1	0	YP_292379.1	0
YP_003422222.1	0.21629	YP_001865633.1	0.64641	ZP_00513550.1	0.17606
YP_720383.1	0.14833	YP_001519795.1	0.16184	NP_926960.1	0.24433
NP_924037.1	0.4959	YP_477888.1	0.02	YP_476236.1	0.18332
ZP_03765743.1	0.05252	ZP_06309122.1	0.03263	ZP_06303619.1	0.04544
ZP_06382633.1	0.00629	ZP_03272565.1	0.01162	YP_001867862.1	0.08024
NP_487383.1	0.07626	ZP_05027018.1	0.11311	ZP_03157928.1	0.05402
YP_002379307.1	0.14342	YP_001656510.1	0.01304	CAO88532.1	0.00406
YP_001734282.1	0.08139	ZP_05035171.1	0.24695	YP_003321759.1	0.10562
NP_440631.1	0.17718	ZP_01728449.1	0.02694	YP_001805532.1	0.07568
YP_324147.1	0.07804	ZP_01631702.1	0.05799	YP_171694.1	0.23655
ZP_01619715.1	0.0929	YP_002485176.1	0.16519	NP_682661.1	0.14745
ACZ01947.1	0.2071	ACA34361.1	0.03737	YP_002246621.1	0.62326
YP_001956544.1	0.53835	YP_002521773.1	0.18831	YP_003318903.1	0.24769
YP_001434322.1	0.05594	YP_001277895.1	0.02244	YP_002463893.1	0.07475
YP_001635535.1	0.13303	YP_001275116.1	0.12249	YP_001434466.1	0.32788
YP_002523729.1	0.11349	YP_003320888.1	0.1176	YP_872957.1	0.31202
ZP_04994112.1	0.02004	ZP_05485955.1	0.01029	YP_003454004.1	0.26381
ZP_05108662.1	0.16098	YP_125768.1	1.50E-04	YP_094405.1	0.00367
YP_122766.1	1.40E-04	YP_001252230.1	0.00366	NP_929475.1	0.53443
ZP_06125279.1	0.21751	YP_001908923.1	0.19784	YP_003610898.1	0.11231

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YP_003366969.1	0.21291	ZP_04630637.1	0.17362	ZP_04622655.1	0.0264
YP_001005136.1	0.00958	ZP_04640613.1	0.07132	ZP_04619405.1	0.15769
ZP_04628154.1	0.00819	ZP_04634945.1	0.02032	NP_901211.1	0.31062
AAT90821.1	0.36314	NP_931838.1	0.05326	YP_003042985.1	0.01788
ADI05721.1	0.4903	ZP_05508642.1	0.63743	ZP_06473130.1	0.60316
ADI05723.1	0.18525	ZP_06473132.1	0.15734	ZP_05508640.1	0.31386
ABA18623.1	0.15942	YP_001268287.1	1.40E-04	NP_744924.1	0.00579
ABW82985.1	0.23424	YP_001702766.1	0.58166	YP_003109695.1	0.80865
ZP_05487905.1	0.5403	AAQ94254.1	0.02044	YP_001106327.1	1.40E-04
YP_003383869.1	0.17043	ZP_06215420.1	1.40E-04	ZP_06400214.1	0.01879
YP_001537502.1	0.08911	YP_001159315.1	0.01992	YP_003114003.1	0.46538
ZP_06396614.1	0.00362	ZP_06216175.1	1.40E-04	YP_003337503.1	0.64837
NP_625553.1	0.0038	NP_630007.1	1.50E-04	ZP_05523120.1	0.00531
ZP_04711553.1	0.16547	ZP_04696369.1	0.05592	CAJ87985.1	0.3674
YP_001828148.1	0.34745	YP_001828151.1	0	ZP_06276851.1	0
ZP_05510151.1	0.52254	ZP_05525553.1	1.50E-04	NP_627460.1	0.00349
NP_925466.1	1.0102	ZP_06275604.1	0.37975	ZP_04683649.1	1.40E-04
ZP_06574398.1	1.40E-04	NP_823468.1	0.12183	YP_001510010.1	0.21853
ADI05069.1	0.14526	YP_481193.1	0.37598	ZP_05519951.1	0.33327
ZP_04697189.1	0.03402	YP_001822856.1	0.0566	ZP_05805182.1	0.22387
ZP_06273894.1	0.16264	ZP_06775747.1	0.59226	YP_002872771.1	0.52329
YP_001107649.1	0.27776	YP_644158.1	0.66901	YP_003410476.1	0.42931
YP_003513545.1	0.30554	YP_001160192.1	0.04825	YP_001538412.1	0.04718
ZP_06218767.1	0.01989	ZP_06401238.1	0.01351	ZP_04605143.1	0.08634
ZP_04334936.1	0.33248	YP_003380433.1	0.36318	CBL56467.1	0.3162
ZP_06263411.1	0.03121	YP_055692.1	0.04995	YP_001363074.1	0.34108
YP_923184.1	0.38815	YP_003117494.1	0.27967	NP_626636.1	0
ZP_05526420.1	0	ZP_05020752.1	0.04456	ZP_06707711.1	0.02527
ZP_05541465.1	0.02501	ZP_05531190.1	0.0254	ZP_04688462.1	0.01231
NP_826962.1	0.02472	AAA99449.1	0.03733	YP_003491959.1	0.06878
CAP09196.1	0.17014	ZP_05518129.1	0.07645	ADI10571.1	0.0649
ZP_05486602.1	0.02613	ZP_04991293.1	0.02771	ZP_04998216.1	0.08209
ZP_05506387.1	0.03823	YP_001826617.1	0.00667	ZP_04692874.1	0.01132
ZP_06771104.1	0.05483	ZP_05004314.1	1.50E-04	ZP_05014614.1	0.06268
ZP_04701784.1	0.08487	ZP_06270805.1	0.02653	ZP_05802441.1	0.02459
ZP_06281367.1	0.00615	CAJ88318.1	0.43644	ZP_03926575.1	0.61659
ZP_06241187.1	0.29106	ZP_06410760.1	0.14775	YP_481038.1	0.16846
ZP_06475441.1	0.21823	YP_715825.1	0.0562	YP_001505622.1	0.10271
ZP_06414704.1	0.13314	ZP_00995632.1	0.22894	YP_003149002.1	0.27018
YP_003155091.1	0.38187	YP_003299252.1	0.35254	YP_003652970.1	0.15793
YP_003342499.1	0.17411	YP_003161469.1	0.25532	YP_003314180.1	0.08879
YP_003637245.1	0.12883	YP_003326714.1	0.15154	YP_002881822.1	0.31793
ZP_06906911.1	0.09223	ZP_05367087.1	1.40E-04	YP_003362822.1	1.40E-04

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YP_001854929.1	0.29215	YP_001624251.1	0.109	YP_831948.1	0.08167
YP_002488265.1	0.0527	YP_948166.1	0.03204	ZP_06503400.1	0.00158
YP_002957004.1	0.02143	YP_001222359.1	1.40E-04	YP_001710322.1	0.01186
YP_062220.1	0.25075	ZP_01129639.1	0.13995	ZP_06806178.1	0.21691
ZP_05913015.1	0.28409	YP_872634.1	0.46326	NP_824120.1	0.05728
ZP_06709944.1	0.11319	YP_003340100.1	0.23114	ADI05613.1	0.16585
ZP_06236605.1	0.19412	YP_713856.1	0.08417	YP_481687.1	0.15653
YP_002486436.1	0.29643	YP_829805.1	0.10617	ZP_05044619.1	0.42977
NP_896496.1	0.14042	YP_382507.1	0.21252	YP_376477.1	0.14275
ZP_01468596.1	0.1059	ZP_04997010.1	0.07096	ZP_06712230.1	0.06574
YP_001103770.1	0.05849	ZP_06565405.1	0.0437	ZP_05478121.1	0.1985
YP_003132910.1	0.20902	YP_002778425.1	0.25608	YP_117827.1	0.06805
YP_881400.2	0.09328	NP_962419.1	0.01324	YP_883478.1	0.01105
ZP_05218288.1	0.01085	ZP_04748740.1	0.05657	ZP_06848582.1	0.04261
NP_960933.1	0	ZP_05216417.1	0	ABK67230.1	0
YP_888603.1	0.13758	YP_640530.1	0.02201	ABB77262.1	0.1206
YP_001134041.1	0.05188	YP_954545.1	0.06453	ZP_06851950.1	0.15598
ZP_06847378.1	0.10241	YP_905334.1	0.13941	spO69473.2	0.01305
NP_302137.1	0.03154	ZP_02551630.1	0	NP_216762.1	0
pdb2GP6A	0	ZP_03420752.1	0	YP_955728.1	0.11464
YP_001133067.1	0.07411	YP_001069080.1	0.04781	YP_637959.1	0.0556
YP_001705331.1	0.04431	YP_003657618.1	0.20774	YP_954544.1	0.0317
YP_640529.1	0.02972	ABB77261.1	0.0832	YP_001134042.1	0.10645
YP_001702614.1	0.29246	ZP_05224071.1	0.0059	ZP_05216418.1	0
YP_881401.2	0	ZP_04748739.1	0.01161	YP_003031688.1	1.40E-04
ZP_06738705.1	0	ZP_05221072.1	0	ZP_06433499.1	0
ZP_03537303.1	0	ZP_02551631.1	0	NP_216761.1	0
pdb2WGFA	0.00404	ZP_06848581.1	0.02815	YP_905335.1	0.01164
YP_001851619.1	1.50E-04	CAA19201.1	0.14225	NP_302136.1	1.40E-04
YP_888602.1	0.05359	YP_003647412.1	0.28013	YP_003647663.1	0.01446
YP_003660003.1	0.37051	YP_003274222.1	0.13316	YP_002767121.1	0.0057
BAE66720.1	1.40E-04	ZP_06829315.1	0.06329	YP_701185.1	0.00413
YP_002778116.1	0.00354	YP_003099122.1	0.38307	YP_003201410.1	0.26168
ZP_06160624.1	0.43683	YP_003151484.1	0.31758	YP_003182339.1	0.20791
ADI05720.1	1.01041	YP_001613165.1	0.66288	YP_001221421.1	0.39455
ZP_05915453.1	0.71085	CBL15418.1	0.81825	YP_290032.1	0.6036
NP_001046196.1	0.70299	ZP_01011633.1	0.61056	YP_001755735.1	0.10169
YP_001771620.1	0.07816	YP_002497158.1	0.2626	YP_001927689.1	0.01783
YP_001641984.1	0	YP_002423698.1	0	YP_002965875.1	0.00577
YP_001370916.1	0.03587	NP_540030.1	0.00553	ZP_05180768.1	0
YP_221592.1	0	ZP_05451116.1	0	NP_697867.1	0
YP_673879.1	0.15071	NP_102826.1	0.03686	ZP_05807959.1	0.02002
YP_988924.1	0.10009	YP_001609687.1	0.04214	YP_033556.1	0.02639

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YP_002972102.1	0.14395	YP_032191.1	0.04527	XP_002667559.1	0.02672
YP_002549457.1	0.13188	NP_354590.1	0.05736	YP_002544816.1	0.02268
YP_002976168.1	0.0112	ZP_03501652.1	0	YP_469979.1	0
YP_002281624.1	0.00559	YP_001978707.1	0.00769	YP_768399.1	0.01629
YP_002826322.1	0.02546	NP_386045.1	0.00539	YP_001327408.1	0.14959
ZP_01226013.1	0.10419	ZP_01439829.1	0.14206	ZP_05377028.1	0.223
ZP_05377031.1	0.44295	YP_002289478.1	0.10796	YP_001206625.1	0.0184
YP_001239518.1	0.05638	NP_770448.1	0.35056	YP_569223.1	0.05385
YP_780944.1	0.04284	YP_531981.1	0.04104	YP_576785.1	0.00939
YP_317857.1	0.01727	ZP_01046402.1	0.01119	YP_486963.1	0.04702
ZP_06359644.1	0.02683	YP_001991226.1	0.00561	NP_947364.1	1.40E-04
ZP_06865577.1	0.24666	YP_001416166.1	0.23223	YP_411098.1	0.22474
ZP_05315082.1	0.2205	ABZ10239.1	0.16924	ABZ09514.1	0.12157
YP_591445.1	0.54962	YP_823189.1	0.32366	CBL16355.1	1.13516
YP_527929.1	1.54016	YP_003321766.1	0.43799	YP_002762103.1	0.321
YP_003319262.1	0.33299	YP_003011328.1	0.4135	ZP_02927314.1	0.75585
ZP_03128496.1	0.5687	ZP_04336020.1	0.62324	ZP_04218121.1	0.72335
YP_001819288.1	1.09534	YP_001716840.1	0.97743	NP_925799.1	0.82341
CAE51174.1	0.88865	YP_003407323.1	0.36937	ZP_04694914.1	0.32265
YP_003638412.1	0.32518	ZP_06474119.1	0.2868	YP_714578.1	0.08334
ZP_06410568.1	0.0775	YP_481938.1	0.14534	ZP_06239952.1	0.18189
YP_001506731.1	0.021	ZP_06474198.1	0.11083	ZP_06475674.1	0.15819
ADE35084.1	0.13224	ZP_06400223.1	0.00286	ZP_06215433.1	1.50E-04
ZP_04604118.1	0.05412	YP_001159324.1	0.05109	YP_001537512.1	0.01008
ZP_04331318.1	0.39454	NP_824014.1	0.08766	BAA92282.1	0.07556
ZP_04689825.1	0.04311	ZP_05537284.1	0.05727	spQ02578.1	0.03665
ZP_05534287.1	0.11968	ZP_06708601.1	0.07852	YP_003489944.1	0.04218
ZP_05019159.1	0.04081	BAA92283.1	0.05637	NP_629460.1	0.22442
spQ05356.1	0.18818	ZP_06774389.1	0.17901	ZP_06273114.1	0.11975
ZP_05000774.1	0.05127	AAR83903.1	0.08711	ZP_05504791.1	0.05626
ZP_06908836.1	0.1051	ADI05885.1	0.14008	YP_003111853.1	0.16338
ZP_05513869.1	0.02324	BAH68151.1	0.40207	ABH85408.1	0.16247
CAK51040.1	0.0301	CAB72142.1	0.00268	AAR30162.1	1.40E-04
NP_851491.1	0.00567	BAA87907.1	0.10556	spP16538.1	0.19348
CAM34345.1	0.12351	AAG03067.1	0.08481	YP_003135160.1	0.20681
AAM33653.1	0.13672	CAA61989.1	0.15154	ACN64834.1	0.25946
AAP85362.1	0.25074	AAQ08916.1	0.34205	YP_289279.1	0.22267
AAP69573.1	0.44378	YP_003300357.1	0.43357	ADE34518.1	0.28586
BAA23144.1	0.17595	ADB23391.1	0.22757	CAM58798.1	0.36062
CAP12600.1	0.31571	CAH10161.1	0.21712	ADB02843.1	0.32229
AAG30189.1	0.207	AAV48829.2	0.15284	ACI88861.1	0.14874
AAC18107.1	0.10158	AAA19616.1	0.00603	NP_823552.1	0.1064
ZP_06271604.1	0.08571	ZP_06412663.1	0.3055	ZP_05523867.1	1.60E-04



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NP_629237.1	1.40E-04	YP_483178.1	0.21698	ZP_05514250.1	0.18745
AAA26488.1	0.12447	CAA54858.1	0.24532	CBH32088.1	0.20856
CBH32809.1	0.18789	AAX57191.1	0.08968	ZP_05511544.1	0.13643
CAH10117.1	0.10378	spP41175.1	0.17248	AAK06784.1	0.10946
ACP19353.1	0.13784	AAO65346.1	0.2054	CAA60569.1	0.05778
YP_003114292.1	0.23419	CAG14965.1	0.06626	ZP_06274714.1	0.09406
ACQ84440.1	0.04914	BAJ07842.1	0.09135	BAA92280.1	0.06322
CAK51028.1	1.40E-04	AAR30152.1	1.40E-04	ZP_05017405.1	0.06834
AAB36562.1	0.03999	AAK57525.1	0.06571	AAO65362.1	0.07459
AAA67433.1	0.10946	AAD13536.1	0.11236	ACX83617.1	0.06322
CAC05671.1	0.05345	spP16540.1	0.06331	AAD20267.1	0.11299
BAC79044.1	0.17842	ZP_06236449.1	0.19379	ZP_05014210.1	0.08943
ZP_05511572.1	0.05481	AAK61718.1	0.07122	ADI09964.1	0.11961
BAB12566.1	1.40E-04	BAA92279.1	0.08451	BAA92277.1	0.00446
spP43678.2	0.01014	CAF34427.1	0.21731	BAA82309.1	0.32503
YP_003339797.1	0.20451	ZP_05014197.1	0.36667	ABX71148.1	0.12409
ABX71114.1	0.14022	AAR23326.1	0.14012	CAE17527.1	0.05592
ABL09959.1	0.15997	BAA92281.1	0.08204	CAJ42320.1	0.05518
CAA12017.1	0.14207	YP_003117176.1	0.3721	YP_001159052.1	0.2419
AAF81728.1	0.36367	ZP_04991258.1	0.05805	AAF70106.1	0.00689
BAB72045.1	0.00496	BAA92274.1	0.03365	BAA92275.1	0.02272
BAA92272.1	7.20E-04	AAA87618.1	0.06988	prf2104259E	1.40E-04
AAA65206.1	1.40E-04	ZP_06400790.1	0.04143	ZP_06219891.1	0.22733
ABC00726.1	0.21188	BAA92276.1	0.10161	NP_681411.1	0.64339
YP_001734261.1	0.49872	NP_441410.1	0.42788	CAO87119.1	0.1821
YP_001659498.1	0.04487	ZP_05025752.1	0.35482	YP_001515431.1	0.5408
ZP_06380866.1	0.04522	ZP_03274427.1	0.03317	BAI90987.1	0.09098
YP_720438.1	0.32031	ZP_01620447.1	0.34703	YP_002481986.1	0.49234
YP_321757.1	0.08727	YP_001866973.1	0.14224	ZP_03768479.1	0.20252
ZP_06309058.1	0.19441	ZP_06304162.1	0.109	YP_002375911.1	0.27348
ZP_03153752.1	0.24518	YP_002371403.1	0.19905	YP_003136970.1	0.10217
ZP_05035437.1	0.66662	ZP_01856427.1	0.87829	ZP_01092936.1	0.85099
YP_001956501.1	1.08658	ZP_05494450.1	1.55112	ZP_01999727.1	1.62406
CAJ73556.1	1.13487	CAJ74369.1	0.7046	CAL48956.1	1.268
YP_634525.1	1.21131	ZP_02733623.1	0.91265	ZP_01089125.1	0.85118
YP_003370172.1	0.78444	YP_003630586.1	0.91534	ZP_01857435.1	0.91375
YP_003371367.1	0.58784	ZP_01090368.1	0.75174	YP_003629723.1	0.30422
ZP_01851831.1	0.51604	CAM58799.1	0.55551	YP_483225.1	0.29799
CAH10116.1	0.1147	CAA60570.1	0.03832	AAV57525.1	0.04506
AAB36563.1	0.17956	AAA65207.1	0.55223	AAO65363.1	0.09222
ADB02844.1	0.29638	ABX71115.1	0.29373	ABX71149.1	0.21397
ZP_05017404.1	0.10908	AAO65347.1	0.30786	CAG14966.1	0.10926
AAK57526.1	0.12509	AAD13537.1	0.19091	AAK61719.1	0.3039

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CAA61990.1	0.3981	ZP_05511573.1	0.36786	AAA67434.1	0.30645
ZP_05511545.1	0.57449	ADI09965.1	0.14167	ABL09958.1	0.18209
ADE34519.1	0.33226	AAZ78326.1	0.25405	BAB12567.1	0.17193
AAP85361.1	0.96984	YP_003114293.1	0.58336	spP41176.1	0.68647
ZP_04991257.1	0.25405	BAB72046.1	0.04839	AAF70107.1	0.09696
ZP_06274715.1	0.14693	BAJ07844.1	0.23594	YP_001159053.1	0.41195
AAX57192.1	0.40789	AAR30151.1	0.36265	AAF81729.1	0.51588
AAA26489.1	0.20391	AAD20268.1	0.25733	ACX83618.1	0.16275
ZP_05514249.1	0.14918	ZP_05014198.1	0.3385	YP_483177.1	0.27608
ZP_05523866.1	1.50E-04	pdb1TQYB	0.11776	NP_629238.1	0.24894
ZP_06412664.1	0.36289	BAC79045.1	0.23417	CAB38455.1	0.27893
spP16539.2	0.05551	CBH32089.1	0.17907	CBH32808.1	0.17127
CAA12018.1	0.30789	AAR23327.1	0.26654	ACN64835.1	0.41732
ZP_06271605.1	0.0821	NP_823551.1	0.01153	ACP19354.1	0.23933
ZP_06236450.1	0.48577	CAA54859.1	0.42653	ADB23392.1	0.52167
YP_003300356.1	0.35664	AAQ08917.1	0.456	YP_003135161.1	0.41405
AAM33654.1	0.1362	AAG03068.1	0.35385	ZP_06474197.1	0.57901
YP_003407322.1	0.66464	YP_481937.1	0.17767	YP_714577.1	0.20004
ZP_06474120.1	0.43167	ZP_06239951.1	0.22566	ZP_06410569.1	0.22729
ZP_04331319.1	0.74992	ZP_05000773.1	0.28089	YP_003489945.1	0.0914
ZP_05537285.1	0.10858	ZP_05019158.1	0.09401	ZP_05534288.1	0.15879
spQ05357.1	0.28485	spQ02579.1	0.18488	AAG26880.1	0.1871
ZP_04689824.1	0.15856	ADI05886.1	0.27968	ZP_05513870.1	0.07938
ZP_06708600.1	0.16429	YP_003638413.1	0.64909	ZP_04710102.1	0.15
ZP_04694915.1	0.06787	ZP_06475673.1	0.5111	ZP_06215432.1	0.23415
YP_001159323.1	0.4921	ZP_06400222.1	0.19432	NP_925798.1	1.24491
CAE51175.1	1.31939	ACH85585.1	1.42245	YP_001507666.1	0.45545
ZP_05512102.1	0.4417	ZP_04996399.1	0.28237	YP_711539.1	0.50802
YP_713202.1	0.08218	YP_094406.1	0.03166	YP_001252229.1	0.00989
YP_122767.1	1.40E-04	YP_125769.1	0.00629	ZP_06186528.1	0.29563
ZP_05108663.1	0.46084	YP_002152608.1	2.00709	NP_287054.1	0.75864
ZP_06656971.1	0.09671	YP_001952428.1	1.25281	ZP_04431836.1	1.42941
YP_118118.1	0.44996	YP_001108054.1	0.57407	YP_003135480.1	0.31249
YP_001105171.1	0.30919	ZP_03312599.1	0.95901	ZP_06404813.1	0.84366
YP_003157640.1	0.92562	YP_389151.1	0.42093	YP_002435429.1	0.23634
YP_011775.1	0.0107	YP_460249.1	0.59052	YP_847819.1	0.31728
YP_003631669.1	1.23798	ZP_01135301.1	1.03872	YP_002908445.1	0.11545
YP_366391.1	0.01795	ZP_01628959.1	0.29388	YP_001864952.1	0.1758
YP_323103.1	0.00859	AAA93155.1	0.00973	NP_489395.1	1.40E-04
ZP_06308630.1	0.16042	ZP_03765704.1	0.06847	CAM34277.1	0.61477
ZP_05482537.1	0.16918	ZP_05519919.1	0.06362	ZP_05505192.1	0.08628
ZP_06474532.1	0.61582	ABJ98759.1	0.15303	NP_821274.1	0.35097
YP_003628511.1	0.22644	ZP_02733786.1	0.22291	ZP_01312929.1	0.22907

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YP_902752.1	0.09049	YP_002538591.1	0.06781	YP_001230775.1	0.04659
ZP_05311356.1	0.0311	YP_002138914.1	0.00417	YP_003021923.1	0.0078
YP_001952503.1	0.16295	YP_002604563.1	0.2494	YP_001529557.1	0.19084
ZP_01907910.1	0.31374	YP_001611456.1	0.136	YP_526162.1	0.31524
YP_003203516.1	0.19475	ZP_04690737.1	0	ZP_06581582.1	0
NP_624465.1	0.00498	ZP_06533593.1	1.40E-04	ZP_06414873.1	0.07373
YP_711918.1	0.14131	YP_002547431.1	0.28546	ZP_05538111.1	0.07813
ZP_06822883.1	0.03282	YP_482018.1	0.24426	ZP_06416258.1	0.03364
YP_001508250.1	0.02532	ZP_06475317.1	0.05458	ZP_05519816.1	0.08993
YP_713404.1	0.07566	ADI03440.1	0.29476	YP_001102300.1	0.17659
YP_002430227.1	0.22821	ZP_01889250.1	0.01569	ZP_01255378.1	0.03571
ABF00127.1	0.07273	YP_738775.1	0	YP_734794.1	0
YP_870473.1	0	NP_717214.1	0.0125	YP_926992.1	0.127
YP_964148.1	0.00232	YP_001049812.1	0.00233	YP_001553887.1	0.00233
YP_001182853.1	0.00234	YP_002358838.1	0.00234	YP_001365632.1	0
ACI12948.1	0	ZP_01704383.1	0	YP_563629.1	0.02563
YP_749912.1	0.00732	BAF64738.1	0.00445	YP_001094790.1	0.04776
ZP_01221855.1	0.0059	YP_129673.1	0	AAL01060.1	0
ZP_01065944.1	1.60E-04	YP_002417804.1	1.30E-04	ZP_00990741.1	0.00236
YP_003555951.1	0.0078	ZP_02158284.1	0.02567	YP_001759810.1	0.00434
YP_001474934.1	0.01038	YP_001675216.1	5.80E-04	AAB81123.1	0.02145
YP_001502760.1	0.00461	YP_002312829.1	0.01551	YP_269802.1	0.07877
BAA89382.2	0.01411	YP_943075.1	0.05362	ZP_01216282.1	0.11794
AAK72879.2	0.81267	YP_001657798.1	0.06254	NP_485686.1	0.01279
YP_325239.1	0.01134	NP_924905.1	0.22202	NP_925794.1	0.18351
ZP_03764926.1	0.05202	ZP_06303629.1	0.01237	ZP_06309131.1	0.01153
YP_001864953.1	0.06488	ZP_01628960.1	0.06494	ZP_03765701.1	0.04503
ZP_06308627.1	0.05946	AAB82059.1	0.00691	YP_001863788.1	1.40E-04
YP_323100.1	0.00528	NP_489391.1	0.00638	ZP_01630197.1	0.03803
YP_003468841.1	0.07251	YP_003039750.1	0.04394	AAK16098.1	0.03511
ZP_03852152.1	0.3109	YP_003121147.1	0.1185	ZP_06475065.1	0.20862
ZP_06239780.1	0.18572	YP_001509871.1	0.04874	ZP_06418152.1	0.04616
YP_711796.1	0.05982	YP_480040.1	0.08547	YP_001625680.1	0.3074
ZP_06567071.1	1.40E-04	YP_001104568.1	1.50E-04	NP_828537.1	0.12888
YP_003114219.1	0.16391	YP_003100278.1	0.11575	ZP_04604233.1	0.3196
YP_713125.1	0.14343	ZP_06237636.1	0.1316	ADI04101.1	0.10473
YP_001533303.1	0.3552	YP_823248.1	0.34047	NP_927171.1	0.41649
ZP_01017354.1	0.54763	YP_002800097.1	0.1506	ZP_01017353.1	0.43034
NP_927172.1	0.23968	YP_823247.1	0.19681	YP_001533304.1	0.27455
ZP_02736467.1	0.39345	YP_003121148.1	0.18832	ZP_03852153.1	0.11171
YP_003299282.1	0.52768	ACY06292.1	0.33135	ZP_04604231.1	0.25113
ZP_06475066.1	0.1875	ZP_06241163.1	0.12134	YP_001509872.1	0.04346
YP_711795.1	0.0406	ADI04100.1	0.12754	YP_480039.1	0.04881

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YP_003114220.1	0.23461	YP_003100277.1	0.17261	YP_001625679.1	0.26175
NP_828538.1	0.10691	ZP_06567072.1	0.0302	ZP_06237637.1	0.11713
YP_713126.1	0.14479	YP_001036569.1	0	YP_001104567.1	0.09572
ZP_05429721.1	0	YP_824341.1	0.15811	YP_001875990.1	0.40352
YP_001277223.1	0.00465	AAO25836.1	0.12977	YP_589544.1	0.20313
YP_003101785.1	0.09508	ZP_05487183.1	0.07998	AAO25874.1	0.04498
AAO25869.1	0.05877	AAO25848.1	0.03452	YP_003117046.1	0.14255
AAO25858.1	0.05383	ZP_05007174.1	0	AAO25879.1	0.08253
ZP_06776411.1	0	AAO25889.1	0.13777	ZP_06776526.1	1.40E-04
ZP_05008088.1	1.40E-04	YP_001822121.1	1.50E-04	AAL06699.1	0.07058
ZP_06276003.1	0.00235	ZP_05000555.1	0.05785	ZP_06582017.1	0
ZP_04691137.1	0	YP_001535471.1	0.12678	AAO25904.1	0.11584
AAO25852.1	0.07418	AAQ17110.2	0.08368	YP_001159519.1	0.09031
YP_003342442.1	0.07005	ZP_03155517.1	0.15644	YP_001537032.1	0.06962
AAM94794.1	0.04108	YP_003265216.1	0.24888	YP_001656298.1	0.14154
YP_001543642.1	0.24054	AAP92148.1	0.24725	YP_003343641.1	0.26368
AAO25864.1	0.20185	YP_001157456.1	0.09291	AAO25899.1	0
AAN79725.1	0	YP_113701.1	0.25919	ZP_06398834.1	0.00569
ZP_06217080.1	1.40E-04	YP_002763824.1	0.00416	CAO88199.1	0.2355
ZP_04386432.1	1.40E-04	AAK72880.2	1.83806	YP_002136334.1	0.00746
YP_002494425.1	0.04054	ZP_06910398.1	0.36572	YP_003631336.1	0.77195
YP_001102302.1	0.34884	YP_002547432.1	0.47094	ZP_05538114.1	0.18603
ZP_06711167.1	0.09942	YP_926990.1	0.33832	ZP_01216280.1	0.18063
BAA89384.1	0.10854	YP_001675218.1	0.03002	YP_002312831.1	0.05174
AAB81125.1	0.06635	ZP_02158282.1	0.03897	YP_001502762.1	0.02969
YP_003555949.1	0.02305	YP_001094792.1	0.19563	YP_001474936.1	0.03002
YP_001759808.1	0.04426	ZP_01065946.1	0	ZP_00990739.1	0.00381
YP_002417806.1	0	ZP_01221853.1	0.00648	YP_129671.1	0
AAL01062.1	0	YP_870475.1	0.01169	ABF00128.1	0.09716
NP_717212.1	0.02156	YP_964150.1	0.00455	YP_734796.1	0.00951
ZP_01704380.1	0.00456	YP_002358840.1	1.40E-04	YP_001049810.1	0.0047
ACI12950.1	0.00668	YP_563631.1	0.08441	YP_001365630.1	0.00412
YP_001553885.1	0.00227	ZP_01255380.1	0.04112	BAH10137.1	1.40E-04
YP_749910.1	0.02541	AAA93154.1	0.00583	ZP_01889248.1	0.05744
YP_323102.1	0.01008	ZP_03765703.1	0.0724	NP_489394.1	1.50E-04
ZP_06308629.1	0.15256	ZP_04690735.1	0.30931	YP_003203515.1	0.26164
YP_001611457.1	0.32267	NP_624466.1	1.40E-04	ZP_05490880.1	0.10984
ZP_05528765.1	0.00255	YP_526163.1	0.82955	YP_760522.1	0.58488
ZP_01907908.1	0.67724	YP_001865722.1	0.37652	YP_001106669.1	1.15147
YP_001615531.1	0.48876	YP_001580137.1	0.00673	YP_631659.1	0.59427
ZP_03588776.1	6.00E-04	ZP_02372090.1	0	YP_440535.1	0
ZP_05589458.1	0	ZP_02367011.1	0	ZP_02385966.1	0
ZP_02467660.1	0.03021	ZP_02476892.1	0	ZP_02359976.1	0

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YP_001064252.1	0	ZP_02461396.1	0	ZP_03455632.1	0.00249
ZP_02487427.1	0	YP_112330.1	0	ZP_04810813.1	0
ZP_04889019.1	0	YP_001077176.1	0	ZP_02453265.1	0
ZP_02503776.1	0	ZP_02495537.1	0	ZP_02408702.1	0
ZP_04522244.1	0	ZP_04820482.1	0	YP_001025197.1	0
YP_336634.1	0	YP_001079551.1	0	ZP_02511620.1	0
ZP_04972475.1	0	YP_990715.1	0	ZP_04893494.1	0
ZP_04898931.1	0	ZP_00438145.2	0	ZP_04883917.1	0
ZP_04911836.1	0	YP_003203170.1	0.44789	YP_106596.1	0
ADG39432.1	0.54945	ZP_05495060.1	1.50334	ZP_06143595.1	1.07707
CBL16347.1	0.96319	EEE21623.1	0.00182	XP_762561.1	1.12509
XP_002369051.1	0.00324	XP_001930982.1	0.78786	ZP_01724481.1	0.01026
YP_001698934.1	1.50E-04	ZP_04991992.1	0.32484	XP_367899.2	0.53384
ZP_04700325.1	0.80471	AAO39787.1	0.58942	ZP_05002580.1	0.33622
ZP_05497960.1	0.7822	ZP_04608935.1	0.23861	ABD96134.1	0.58765
ZP_04608930.1	0.21314	AAW55409.1	0.52379	ZP_05496379.1	0.58689
ZP_02371221.1	0.42741	ZP_04706417.1	0	YP_001544779.1	0.35966
YP_003490005.1	0.22212	ZP_06276326.1	0.00349	ZP_04713303.1	0
ZP_04698103.1	0	ABD17672.1	0.3257	YP_001821790.1	0.01005
BAG69125.1	0.4719	CAQ16328.1	0.35649	ADF57399.1	0.43665
ACC99562.1	0.28206	ZP_02509675.1	0	AAW84217.1	0.21318
ZP_02459432.1	1.50E-04	ZP_02451261.1	0	ZP_02501781.1	0
ZP_02415186.1	0	ZP_02493565.1	0	ZP_00437977.1	0
ZP_02474929.1	0	ADI12768.1	0.09113	ZP_02406687.1	1.40E-04
ABS90472.1	0.05753	ZP_04094218.1	1.50E-04	AAQ91801.1	0.37369
ZP_05495405.1	0.39548	ACI15848.1	1.40E-04	ZP_04315173.1	0.00265
BAG69037.1	0.3129	ACI15849.1	1.60E-04	ACI15843.1	0.00967
ACI15850.1	1.40E-04	AAW84198.1	0.34098	ACI15851.1	1.40E-04
ZP_05497963.1	0.78942	AAS98781.1	0.08617	YP_002483586.1	0.32621
AAT70101.1	0.16188	AAQ91794.1	0.36322	ACC99571.1	0.34096
ZP_02468549.1	0.46866	AAW84173.1	0.2798	ADF57409.1	0.16707
ACC99567.1	0.41259	ABG54501.1	0.29185	ACC99584.1	0.222
ACT85959.1	0.16061	ACZ54289.1	0.54277	ADD65296.1	1.40E-04
ADD65298.1	0.01012	ZP_05543640.1	0.22014	ABD96133.1	0.19848
ABD96135.1	0.29931	ACY71562.1	0.22832	ACX31707.1	1.40E-04
ACX31698.1	1.40E-04	ACT85960.1	1.40E-04	ADF36684.1	0.21466
ACT85961.1	0.00486	BAG68965.1	0.00533	ABU25214.1	0.28632
YP_632112.1	1.40E-04	ZP_05495404.1	0.23874	ABS82482.1	0.00956
YP_001421789.1	5.10E-04	ZP_02468523.1	0.33457	ACC99573.1	0.22964
AAW84171.1	0.34081	ZP_06278979.1	0.28533	AAX86995.1	0.46254
ZP_06496711.1	0.35798	BAG69126.1	0.46817	ZP_01912681.1	0.13883
BAG69112.1	0.08234	BAG68990.1	0.00731	ACC99570.1	0.39645
BAG69000.1	0.02548	ZP_06913880.1	0.10991	BAG69124.1	0.3751

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BAF50722.1	0.12177	ABR19765.1	0.00984	ZP_05496380.1	0.14728
ABQ15135.1	0.00493	ABR19766.1	0.03017	ABQ15134.1	0.00489
ABR19778.1	0.00424	ZP_02371222.1	0.33609	ABR19767.1	0.00991
ABR19770.1	0.00991	ZP_02371211.1	0.19143	ADF57396.1	0.38786
ZP_04610438.1	0.41621	ZP_02501775.1	0	ZP_02385106.1	0.03586
ZP_02406678.1	0.04283	ZP_02451253.1	0	ZP_02474922.1	0
ZP_02493560.1	0.00277	YP_338454.1	0	ZP_02415179.1	0
YP_337768.1	0	ZP_03790872.1	0.0901	ZP_02509669.1	0
ZP_02485421.1	0	ZP_02417352.1	0	ZP_02509673.1	0
ZP_02485424.1	0	ZP_02451257.1	1.50E-04	ZP_02474926.1	0
ZP_02459427.1	0	ZP_02501779.1	0.00279	ZP_02408757.1	0.04671
ZP_02493564.1	1.60E-04	AAY00035.1	0.53338	ZP_05543636.1	0.36813
ABG54500.1	0.45423	ACI15846.1	1.60E-04	ZP_02371244.1	0
ZP_02385142.1	0	NP_851434.1	0.33344	ACI15845.1	0.00954
YP_434655.1	0.23946	ZP_02385114.1	1.40E-04	AAX44121.1	0.56041
YP_002268378.1	0.57864	YP_001421793.1	0	ZP_02371220.1	0.00384
CAJ57408.1	0	ZP_06496704.1	0.72492	CAA84505.1	1.40E-04
ABR19775.1	0.04956	ZP_05495052.1	0.47906	ZP_05495047.1	0.45867
ZP_05495045.1	0.54671	ZP_02381462.1	0.37031	ZP_05498156.1	0.61358
YP_003124921.1	0.32908	ZP_05496378.1	0.18549	CAM74045.1	0.34928
AAM12925.1	0.56971	ZP_06399854.1	0.20672	CAN89635.1	0.28253
ZP_06822185.1	0.20633	ZP_02163864.1	0.27625	ZP_06913872.1	0.36568
ABK32260.1	0.42515	BAG69067.1	0.22027	CAJ57411.1	0
YP_001421790.1	0	ZP_02493563.1	0	ZP_02415181.1	0
ZP_02451256.1	0	ZP_02501777.1	0	ZP_02474925.1	0
ZP_02459426.1	0	ZP_02406680.1	0	ZP_02509672.1	0
ZP_02485423.1	0	YP_237380.1	0.01589	ZP_02468254.1	0.37173
ZP_06496713.1	1.50E-04	ZP_02385109.1	0.00277	ZP_05495051.1	0.43928
ZP_02371212.1	1.40E-04	ZP_02371230.1	1.60E-04	AAM12911.1	0.37467
ZP_02385126.1	1.40E-04	ZP_02375784.1	0.00498	ACR55660.1	0.28825
ZP_02385138.1	4.60E-04	YP_001231834.1	0.30238	ZP_02371209.1	0.00264
ZP_02385102.1	1.50E-04	ACI15837.1	0.00946	ZP_05498212.1	0.19129
ZP_05495048.1	0.56318	YP_002505211.1	0.19687	ACI15847.1	1.40E-04
YP_002505215.1	0.26384	YP_001421032.1	0	YP_001421029.1	0.17936
ABH03697.1	0.01047	ZP_04608938.1	0.34565	CAG23968.1	0
BAF50721.1	0.66428	BAG69045.1	0.29837	ZP_02371218.1	0.005
ZP_02385113.1	1.30E-04	ZP_02468387.1	0.22942	CAM74044.1	0.31814
ZP_06496708.1	0.51236	ZP_05498213.1	0.04481	ZP_02371216.1	0
ZP_02385111.1	0	ZP_02415175.1	0	ZP_05498070.1	0.0313
ZP_02451251.1	0	ZP_02474918.1	0	ZP_02501773.1	0
ZP_02459419.1	0	ZP_02509668.1	0	ZP_02485417.1	0
ZP_02406672.1	0	ZP_05591274.1	0	ZP_02493558.1	0
ZP_02468933.1	0.63989	ZP_02385095.1	0	ZP_02371199.1	0

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YP_439858.1	0	ZP_02451250.1	0	ZP_02406669.1	0
ZP_02415174.1	0	ZP_02474917.1	0	ZP_02459418.1	0
ZP_02501772.1	0	ZP_02474942.1	0.00276	ZP_02485416.1	0
ZP_02509667.1	0	YP_335161.1	0	ZP_02493575.1	1.40E-04
YP_111015.1	0	ZP_03450421.1	0	ZP_04523111.1	0
ZP_03790877.1	0	ZP_02415202.1	0	ZP_02408779.1	0
ZP_01770135.1	0	ZP_02485441.1	0	YP_001075430.1	0
ZP_02509688.1	0	ZP_00439135.1	0	ZP_02451272.1	0
ZP_02501792.1	0	ZP_04890085.1	0.00272	ZP_02269298.1	0
ZP_02459447.1	1.40E-04	CAO82982.1	1.40E-04	YP_001062477.1	1.40E-04
ZP_04608934.1	0.30556	ZP_01913336.1	0.48315	CAO82978.1	1.50E-04
CAO82977.1	1.40E-04	ZP_02385098.1	0.0031	YP_434660.1	0.21897
NP_851438.1	0.20953	ZP_02365034.1	0.00276	ZP_02371202.1	0.00622
ZP_02467704.1	0.34503	ZP_02371775.1	0	ZP_02357871.1	0.00303
ZP_02385634.1	0	ZP_02473911.1	0.00241	ZP_02405573.1	1.40E-04
ZP_02414102.1	1.40E-04	ZP_02500729.1	0	ZP_02492545.1	0.00292
ZP_02450186.1	0	YP_001231832.1	0.36173	ZP_02508670.1	0
ZP_02484360.1	0.00293	AAQ91795.1	1.40E-04	ZP_05498180.1	0.15996
AAZ99722.1	0.25655	BAG69111.1	0.32966	AAQ91797.1	1.50E-04
ZP_05519321.1	0.3262	ZP_06589120.1	0.11329	ZP_04700328.1	0.66285
ZP_04700324.1	0.56184	ZP_04700331.1	0.01027	ACN13113.1	0.00776
ACR61390.1	1.40E-04	ADF36708.1	0.38167	ACS45382.1	0.00486
YP_001866472.1	0.4075	BAG69046.1	1.40E-04	ZP_01997720.1	0.21436
ACY71549.1	0.00484	ZP_02196089.1	0.5937	ZP_05495053.1	0.73963
YP_276662.1	0.29769	ZP_06889850.1	0.54457	YP_001983454.1	0.42667
ZP_05498155.1	0.31231	ZP_02385135.1	1.40E-04	BAG69079.1	0.36901
ZP_01692310.1	1.33241	ZP_06276710.1	0.00293	ZP_02371238.1	0.00538
YP_001828289.1	1.40E-04	CAM34281.1	0.96239	CAL69888.1	0.12118
YP_260103.1	0.15072	ZP_02365037.1	0.05535	ZP_05495044.1	0.53099
ZP_02371774.1	0.00271	ZP_02458364.1	0	ZP_02405578.1	1.40E-04
ZP_02508673.1	0.00269	ZP_02484364.1	0	ZP_02500732.1	0
ZP_02414106.1	0	ZP_02473916.1	0.00269	ZP_02450189.1	0
ZP_02492548.1	0.00267	CAO82985.1	0.2728	ZP_02385633.1	0.00303
ACY71560.1	0.55514	ABH03695.1	0.54798	ZP_06496705.1	0.61371
ZP_06890653.1	0.45107	CAM74190.1	0.59199	ACY71559.1	0.37586
ZP_04608929.1	0.30882	ZP_04993817.1	0	BAG69061.1	0.0072
ABD17674.1	0.00741	CAQ16326.1	0.23923	ZP_06822182.1	0
YP_002505216.1	0.57368	ADE08320.1	0.34844	0.757	0.05936
BAG69102.1	0.35791	ACF54738.1	0.08339	ABO93198.1	0.30547
ZP_06496703.1	0.39173	ZP_04315031.1	0	ACF54741.1	0.02071
CAN89633.1	0.62622	CAM34323.1	1.40E-04	CAM34273.1	1.40E-04
CAM34274.1	0.00453	ZP_02163866.1	0.6106	YP_723336.1	0.1578
AAX44129.1	0.27144	ZP_02501787.1	0	ZP_02493571.1	0.00257

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ZP_02451266.1	0	ZP_02474937.1	0	ZP_02459441.1	0
ZP_02406696.1	0	ZP_02509683.1	1.40E-04	ZP_02485435.1	0
ZP_02415194.1	0	ACF54735.1	0.00345	CAM74077.1	0.24786
AAX86996.1	0.00467	CAM74192.1	0.21443	AAO39782.1	0.01637
ACF54736.1	0.18422	ABB73270.1	0.00813	ADF57403.1	1.40E-04
ADF36685.1	0.00467	ABR19768.1	0.08621	ABB73271.1	1.40E-04
ABB73272.1	0.00454	ACG70841.1	1.60E-04	ACG70843.1	0.05887
AAZ99721.1	0.01437	ABR19776.1	1.40E-04	ABU25212.1	0.02357
ACG70842.1	0.00922	ACY01392.1	0.2532	CAM34275.1	0.04732
CAM34276.1	0.0613	ACX31711.1	1.30E-04	ACN13112.1	0.01856
ACN13122.1	1.40E-04	ACT85958.1	0.08398	ACX31696.1	1.40E-04
ZP_05498157.1	0.11114	ABR19779.1	0.00463	ABR19769.1	1.60E-04
ABR19772.1	0.00465	ACB47225.1	0.24347	ABR19764.1	0.00466
ABR19774.1	0.00931	ZP_02467735.1	1.01129	YP_434662.1	0.2487
NP_851440.1	0.16326	ACI15844.1	2.70E-04	ZP_02467783.1	0.42132
ACX31706.1	0.40937	ACI15840.1	0.00446	ACI15839.1	0.00894
ACI15838.1	1.40E-04	YP_632118.1	0.44315	ACI15842.1	1.00E-04
YP_002966293.1	0.36913	ZP_02501767.1	0	ADD82939.1	0.33587
ZP_02459413.1	0	ZP_02493555.1	0	ZP_03793244.1	0
ZP_02415169.1	0	YP_989785.1	0	ZP_02406663.1	0
ZP_02474912.1	0	ZP_02485414.1	0	ZP_02509663.1	0
ZP_00439228.1	0	ZP_02468378.1	0.72581	ZP_02451247.1	1.60E-04
AAQ91798.1	0.35848	ZP_04991998.1	0	ZP_02468661.1	1.13828
BAF50720.1	0.9299	ZP_06217421.1	0.00681	ZP_06822203.1	0
YP_003113351.1	0.40416	ZP_06143593.1	0.72793	ZP_06401528.1	1.50E-04
YP_003073734.1	1.13685			ZP_02951181.1	0.39454



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Sequence	Distance	Sequence	Distance	Sequence	Distance
XP_760252.1	0.68744	XP_002394108.1	0.12368	XP_001835415.1	0.34783
XP_001876029.1	0.25139	XP_002377153.1	0	XP_001821376.1	0
EDP49937.1	0.02458	XP_002837130.1	0.15534	XP_001939987.1	0.29324
EEY23691.1	0.28014	XP_001903585.1	0.26362	XP_384140.1	0.27637
XP_001210065.1	0.21669	XP_002478017.1	0.12404	XP_002486858.1	0.12302
XP_762565.1	0.88192	ABD47521.1	0.09824	XP_001911464.1	0.1713
AAS98202.1	0.29627	AAAY00095.1	0.03281	ABQ11398.1	0.00758
ABQ11393.1	0.0113	ABQ11392.1	0.00232	AAAY00107.1	1.40E-04
AAAY00122.1	0.00459	ABQ08172.1	0.03503	ABV71348.1	0.09338
ABQ08166.1	0.05029	ABQ08177.1	0.07873	AAAY00069.1	0.02404
AAAY00063.1	0.00942	AAAY00064.1	0.00508	AAAY00065.1	0.00468
AAAY00092.1	0.30455	ABQ08165.1	0.16192	ABQ08171.1	0.15636
ABQ08170.1	0.09636	AAAY00053.1	0.03637	AAAY00054.1	0.00748
AAAY00134.1	0.0597	AAAY00066.1	0.04359	AAAY00072.1	0.0587
AAAY00116.1	0.11074	XP_382500.1	1.40E-04	AAS57296.1	0.01381
AAU10633.1	0.00991	XP_001798591.1	0.08266	AAAY00086.1	1.40E-04
ABQ11386.1	1.40E-04	AAS48892.1	0.00561	EEU40203.1	0.0052
XP_001216121.1	0.00796	BAB88689.1	0.01612	ABQ11396.1	1.40E-04
AAAY00129.1	1.40E-04	AAAY00087.1	1.50E-04	ABQ11395.1	1.40E-04
XP_002478062.1	0.01507	XP_002145792.1	0.03154	XP_001390425.1	0.05655
AAS98199.1	0.14044	CAB92399.1	0.00538	AAR92211.1	1.40E-04
XP_001827098.1	1.60E-04	XP_002384329.1	0.00257	XP_002847317.1	0.15997
AAAY00136.1	0.02337	ABQ11391.1	1.60E-04	AAAY00098.1	1.40E-04
ABQ11390.1	0	ABQ11400.1	0	AAAY00097.1	0.00974
AAAY00105.1	0.0047	ABQ11399.1	1.50E-04	AAAY00108.1	0.00467
AAAY00085.1	0.01589	ABQ11394.1	0.00341	AAAY00123.1	0.0094
AAAY00091.1	1.40E-04	ABQ11389.1	1.60E-04	AAAY00093.1	1.40E-04
ABQ11388.1	1.60E-04	AAS98198.1	0.02913	EFE40680.1	1.50E-04
XP_002842704.1	0.04894	EFE33242.1	0.00262	AAP68701.1	0.20863
XP_002483004.1	0.16076	XP_002373130.1	0.00264	XP_001817959.1	1.40E-04
XP_001215384.1	0.13903	EEU34216.1	0.04784	AAS57288.1	0.04691
AAR92210.1	1.40E-04	CAC88775.1	0.01317	XP_001592760.1	0.1386
XP_368816.2	0.17362	AAT69682.1	0.16013	XP_001798923.1	0.12559
XP_001800218.1	0.31667	XP_001241406.1	0	EER28351.1	0
AAS90047.1	0.00535	AAU08792.1	1.60E-04	BAE71314.1	0
AAS90022.1	0	XP_002379951.1	0	XP_001821511.1	0
AAR32704.2	0	AAS89999.1	0.00265	spQ12053.1	1.40E-04
XP_001911528.1	0.06148	XP_681094.1	0	spQ12397.2	0
AAA81586.1	0	ACH72912.1	0.02636	AAZ95017.1	0.0524
AAS92537.1	0.15522	AAAY00070.1	0.04013	AAAY00068.1	0.02396
AAAY00067.1	0.00463	ABQ11380.1	1.50E-04	XP_002147717.1	0.02776
XP_002481882.1	0.01133	ABQ85550.1	0.02794	XP_002568608.1	0.02134

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CAB44712.1	0.0134	XP_681478.1	1.40E-04	prf1905375A	0
spQ03149.2	0	XP_001276035.1	0.01704	XP_001261235.1	0.00275
ACJ13038.1	0	ACJ13036.1	0	XP_756095.1	0
EDP55264.1	0	ACJ13039.1	0	ACJ13037.1	0
AAC39471.1	0	ACJ13035.1	0	ACJ13034.1	0
CAA76740.1	0.00542	XP_001393884.1	0.04276	XP_001822700.1	0
XP_002382817.1	0	CAB44699.1	0.00447	AAAY00120.1	0.04246
AAAY00083.1	1.40E-04	ABQ11387.1	1.40E-04	AAAY00121.1	0.02244
ABQ11385.1	1.60E-04	AAAY00079.1	1.40E-04	AAAY00080.1	0.00986
AAAY00074.1	0.01736	AAAY00081.1	0.02317	AAAY00128.1	1.40E-04
ABQ11397.1	1.50E-04	AAAY00127.1	1.60E-04	AAAY00088.1	1.60E-04
CAB44698.1	0.16267	AAAY00090.1	0.14005	AAAY00078.1	0.16458
XP_002483594.1	0.03993	XP_002152334.1	0.0336	AAP79126.1	0.08479
AAN74983.1	0.01498	AAAY00117.1	0.01401	AAAY00104.1	0.00867
AAAY00094.1	0.02476	AAAY00109.1	0.01	AAAY00124.1	0.01935
XP_001553397.1	0	AAR90250.1	0	XP_001805964.1	0.06446
BAB88752.1	0.00592	XP_001211612.1	0.00276	XP_002376725.1	0.00177
XP_001820992.1	0.00116	XP_001275038.1	0.03871	XP_001402309.1	0.05887
EDP47078.1	0	XP_746435.1	0	XP_001267621.1	0.01239
XP_002846705.1	0.1782	EDP47964.1	0	XP_746913.1	0
XP_001262597.1	0.00571	XP_002848092.1	0.00294	EFE32713.1	0.00529
EFE44835.1	1.40E-04	XP_663604.1	0.11116	XP_001394705.1	0.06274
XP_001823362.1	1.60E-04	XP_664675.1	0.0785	AAR90274.1	0.31617
XP_001266579.1	0.12042	XP_002149615.1	0.1206	XP_657754.1	0.07599
XP_751377.1	0	EDP50840.1	0	XP_001266594.1	0.00704
XP_001217072.1	0.12512	AAP79127.1	0.00928	AAP79128.1	1.40E-04
XP_002144865.1	0.1271	XP_002482902.1	0.03771	XP_001933041.1	0.04797
AAR90273.1	0.05538	XP_002482968.1	0.03438	XP_002486039.1	0.10283
AAAY00100.1	0.01426	ADB77860.1	1.40E-04	ADB77861.1	0.00497
XP_001802212.1	0.02638	XP_001933656.1	0.00832	AAR90272.1	1.40E-04
BAD22832.1	0.00267	ACS74442.1	1.50E-04	ACS74444.1	0.00287
ACS74443.1	0.00237	ACS74441.1	1.40E-04	ACS74449.1	0.00891
AAAY00057.1	0.0319	AAAY00102.1	0.01742	AAAY00113.1	0.00941
AAAY00061.1	0.00924	AAAY00060.1	1.40E-04	AAP68704.1	0.02576
AAAY00106.1	0.01204	ABQ08181.1	0.01899	AAAY00062.1	1.50E-04
AAAY00056.1	1.40E-04	AAAY00101.1	1.50E-04	ABU63483.1	0.05332
AAAY00103.1	0.15794	AAAY00082.1	0.01751	AAAY00071.1	1.60E-04
AAAY00111.1	0.00527	ACJ39411.1	0.03891	AAN75188.1	0.09056
AAD31436.3	0.01731	ACJ39412.1	0.07998	AAP68703.1	0.06619
XP_002149119.1	0.13606	XP_001585805.1	0.01282	XP_001547095.1	0.00514
AAR90249.1	1.40E-04	ABV71370.1	0.55319	ACF10233.1	0.19913
AAP68700.1	0.03476	XP_001210231.1	1.40E-04	BAB88688.1	0.00539
ABQ08174.1	0.04083	ABQ08167.1	0.06696	ACL99720.1	0.06096

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ACL99722.1	0.02387	ACL99721.1	0.1206	ACF10189.1	0.01533
ACF10196.1	1.40E-04	ACF10204.1	1.10E-04	ACF10199.1	1.40E-04
ACF10185.1	1.40E-04	ACF10187.1	1.40E-04	ACF10182.1	0.00364
ACF10228.1	1.40E-04	ACF10224.1	1.40E-04	ACF10205.1	1.30E-04
ACF10183.1	1.40E-04	ACF10190.1	0.01575	ACF10184.1	1.40E-04
ACF10186.1	1.40E-04	ACF10219.1	0.00289	ACF10232.1	1.40E-04
ACF10231.1	1.40E-04	ACF10198.1	0.00256	ACF10201.1	0.01181
ACF10217.1	1.40E-04	AAAY00119.1	0.04424	AAAY00059.1	0.02149
ABQ08169.1	1.50E-04	ABQ08173.1	0.04308	ABQ08180.1	0.0047
ABV71349.1	0.01526	ABQ08175.1	1.60E-04	ABV71352.1	0.01753
ABV71351.1	0.00643	ABV71350.1	0.005	ACJ24815.1	0.02156
AAAY00137.1	0.00504	AAAY00115.1	1.60E-04	AAAY00118.1	0.01612
AAAY00058.1	0.0099	AAAY00114.1	0.02102	AAAY00112.1	1.40E-04
AAAY00055.1	1.60E-04	AAAY00132.1	0.00939	AAAY00096.1	0.00471
CAC94008.1	1.40E-04	AAAY33863.1	1.40E-04	ABQ08178.1	1.50E-04
ACJ24813.1	1.40E-04	ABQ08179.1	0.00466	ABQ08176.1	1.50E-04
AAP68698.1	0.04581	AAD38786.1	0.00394	ABY85790.1	0.01776
AAM93545.1	0.01922	ACN22185.1	0.01403	XP_367294.2	0.05039
ABS85549.1	0.01748	AAL05883.1	0.02727	ABD47522.2	0.01019
XP_001910795.1	0.04655	AAP68699.1	0.01855	XP_960586.2	0.01319
CBI54371.1	1.00E-04	CAM35471.1	0.00268	XP_001219763.1	0.10034
AAO60166.1	0.08114	CAB44719.1	0.02244	EEY14472.1	1.60E-04
ACN32207.1	0.01413	BAA18956.1	0.02006	AAN59953.1	0.06384
AAP79125.1	0.01412	AAP79129.1	1.60E-04	XP_001586760.1	0.01389
XP_001554288.1	0.00548	AAR90248.1	1.40E-04	ABQ08164.1	0.12098
ABQ08168.1	0.0646	AAAY00077.1	0.06476	ABG91136.3	0.05351
ACJ24816.1	0.04988	ACJ24817.1	0.07924	ACJ24814.1	0.09019
AAAY00131.1	1.40E-04	AAAY00133.1	0.00495	AAAY00135.1	0.0526
AAAY00110.1	0.02129	XP_002146110.1	0.30708	XP_681178.1	0.36102
AAR90251.1	1.50E-04	XP_001559596.1	1.40E-04	XP_002488697.1	0.3625
XP_001225797.1	0.30342	XP_002151003.1	0.23772	XP_362767.2	0.46719
ACD39753.1	0	ACD39762.1	0	ABB90282.1	0
XP_382571.1	0	AAS57297.1	1.60E-04	XP_002376293.1	0.92502
XP_002568275.1	0.1328	ACD39770.1	0.10516	ACM42403.1	0.07589
XP_369003.2	0.55377	XP_001905653.1	0.15042	XP_002145720.1	0.17046
XP_001245248.1	1.40E-04	EER29448.1	0.00282	XP_664052.1	0.21758
XP_001554297.1	0	AAR90254.1	0	XP_001228055.1	0.24566
XP_001212807.1	0.16678	XP_002339967.1	0.18378	XP_001226720.1	0.25314
XP_001209382.1	0.0434	XP_681652.1	0.11752	EER26821.1	1.50E-04
XP_001243721.1	0.00281	XP_002542778.1	0.07304	XP_002843683.1	0.13744
XP_001797044.1	0.15481	XP_001906796.1	0.39919	XP_001592866.1	0.09894
XP_002487764.1	0.10455	XP_001230105.1	0.11243	XP_001273603.1	0.23512
ABS86048.1	0.05616	XP_001545394.1	0	AAR90255.1	0

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XP_365166.2	0.32025	XP_002149737.1	0.04855	XP_002340070.1	0.01544
XP_001212610.1	0.338	XP_001393501.1	0.19421	XP_002340038.1	0.03458
XP_002149769.1	0.03314	XP_660834.1	0.33	XP_002379030.1	0
XP_001823618.1	0	XP_002846669.1	0.06588	XP_001246130.1	0.00551
EER25597.1	1.40E-04	CAD19100.1	0.19833	XP_659636.1	0.30852
XP_001225301.1	0.06538	XP_658638.1	0.04992	XP_001216282.1	0.03142
XP_001390084.1	0.42055	XP_001827405.1	0.00801	XP_002384603.1	1.40E-04
ABS58604.1	0.15931	XP_002848394.1	0.06308	EFE42799.1	0.00872
EFE29950.1	1.40E-04	XP_658127.1	0.10579	XP_001818926.1	0.00331
XP_002381902.1	0.00517	AAR90253.1	0	XP_001559289.1	0
AAAY33862.1	0.00285	BAD44749.1	1.40E-04	XP_001258915.1	0.19505
XP_001273475.1	0.18965	XP_748578.1	0.36662	XP_001395291.1	0.16811
XP_660990.1	0.12068	XP_001217248.1	0.0729	XP_002384396.1	0.00557
XP_001827158.1	1.60E-04	XP_002481993.1	0.24426	CAN87161.2	0.31658
EER28084.1	0.00582	XP_001243185.1	0.02032	XP_002487778.1	0.03559
XP_681172.1	0.02111	AAR90275.1	0.08985	ACS74448.1	0.00741
ACS74447.1	0.03954	XP_002567553.1	0.2694	XP_384764.1	0.01739
AAS57298.1	0.01382	AAX62330.1	0.3106	EDP48973.1	0
XP_746971.1	0	XP_001261880.1	0.01265	XP_001554442.1	0
AAR90256.1	0	XP_001393524.1	0.21179	XP_001816639.1	0.15854
XP_002340065.1	0.06425	XP_002149742.1	0.01684	XP_001550802.1	0.17894
ACS74446.1	0.04775	ACS74445.1	0.03632	XP_001797375.1	0.04957
AAR90277.1	0.1343	XP_001937752.1	0.01899	AAR90276.1	0.03703

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Sequence	Distance	Sequence	Distance	Sequence	Distance
NP_929153.1	0.03061	YP_003041506.1	0.04065	ABJ98760.1	0.3656
BAI44065.1	0.36331	ZP_05014772.1	0	ZP_06913928.1	0
YP_001106768.1	0.48983	ZP_06905574.1	0.57538	YP_003660268.1	0.15662
YP_001704304.1	0.12873	ZP_05511692.1	0.34463	YP_003491850.1	0.05605
ZP_06769930.1	1.40E-04	ZP_05005547.1	1.40E-04	YP_002784201.1	0.15378
YP_001106500.1	0.13613	ACZ65476.1	0.27882	YP_439407.1	0
ZP_02384596.1	0	ZP_02370710.1	1.50E-04	ZP_04522671.1	0.00283
YP_001062672.1	0.00566	ZP_02451502.1	0	ZP_02509907.1	0
ZP_04953343.1	0	ZP_02485669.1	0	YP_111207.1	0
ZP_01770943.1	0	ZP_03788956.1	0	YP_001075629.1	0
YP_335348.1	1.40E-04	ZP_03449943.1	0.00281	ZP_04898559.1	0.00282
ZP_02493828.1	0.00283	ZP_02415419.1	0.00284	ZP_02406927.1	0.003
ZP_02459680.1	1.40E-04	AAQ91796.1	0.40564	ZP_04750193.1	0.78978
ABQ85802.1	1.02278	AAX86997.1	0.92582	ABQ85800.1	0.46022
ABQ85797.1	0.39576	ABQ50542.1	0.85622	ABQ85798.1	1.94436
ABQ85803.1	1.19413	ABQ85796.1	0.88647	ABQ85801.1	1.52532
EEE30779.1	0	EEE22142.1	0	XP_665783.1	0.6768
XP_666606.1	0.46585	XP_667412.1	0.4449	EEE20416.1	0.39467
EEE20417.1	0.11872	EEE19009.1	0.18126	AAV68343.1	0.65735
AAX39747.1	0.0374	AAX39748.1	0.09037	EEH59311.1	0.76828
EEH59312.1	0.66635	EEH51938.1	0.58104	EEH59308.1	0.26211
EEH59309.1	0.23292	CAL56184.1	0.01661	EEH51937.1	0.75106
EEH51940.1	0.67838	EEH51939.1	0.68542	EEH59316.1	1.1411
EEH59320.1	1.50E-04	EEH59318.1	0.00965	YP_003117672.1	0.55366
ABK01383.1	0.47521	BAE93739.1	0.2976	ZP_04608939.1	0.20005
ZP_04456870.1	0	NP_670704.1	0	ZP_06204702.1	0
ACY61373.1	0	NP_994707.1	0	YP_003566888.1	0.01264
YP_001719505.1	0	YP_001873845.1	0	YP_071788.1	0
YP_001399673.1	0.00302	ZP_02380485.1	0.32282	YP_003073811.1	0.43339
ZP_02189726.1	0.64592	ABK32263.1	0.53969	ZP_05529765.1	0.48324
ACZ54363.1	0.20059	YP_533222.1	0.56544	NP_519927.1	0.28751
YP_532900.1	0.23977	YP_003262843.1	0.4973	ZP_05511668.1	0.30692
ZP_04691244.1	0.15924	ACZ54311.1	0.2168	BAB69235.1	0
NP_828360.1	0	YP_001510033.1	0.11345	ACZ54323.1	0.02686
ACZ54313.1	0.27098	NP_823457.1	0.31699	ZP_05480793.1	0.19885
ACZ54283.1	0.17278	ADI03643.1	0.25995	ZP_01461605.1	0.32998
BAG69130.1	0.37763	ACY71556.1	0.16853	ACY71551.1	0.09576
ZP_03310385.1	0.46265	ZP_05843280.1	0.51205	ACY71548.1	0.00974
ACY71575.1	0.00971	BAG69041.1	1.40E-04	ACY71563.1	0.00985
ABD17650.1	0.01001	AAW84222.1	0.26711	AAX62324.1	0.08802
YP_564530.1	0.15512	AAX62326.1	0.17365	YP_552078.1	0.60977
YP_002907573.1	0.54556	ABK01390.1	0.26597	BAG69019.1	0.28624

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ZP_06890643.1	0.38812	ZP_02382204.1	0.46678	ACZ54331.1	0.35773
ACY71581.1	0.36916	ACF54732.1	0.23149	BAG69105.1	0.43498
ZP_01913248.1	0.28237	ABD17651.1	0.24036	ABG20987.1	0.37811
ZP_01913463.1	0.4343	ZP_01913249.1	0.42071	ACZ54290.1	0.36479
ABK01387.1	0.48417	ZP_02189725.1	0.45907	CAM17821.1	0.52261
AAW03325.1	0.04841	CAD89773.1	0.04696	BAG68970.1	0.05287
ZP_01467359.1	0.07041	ZP_05519867.1	0.2855	ZP_04696768.1	0.01707
ZP_06587689.1	0.4046	ACZ54330.1	0.08477	ACX31695.1	0.03557
ADF57387.1	0.35089	ABU25211.1	0.0832	ADC68457.1	1.50E-04
ADC68459.1	0.007	ADC68458.1	0.08669	ADC68465.1	0.06905
ADC68514.1	0.01139	ADC68492.1	0.01144	ADC68493.1	1.40E-04
ADC68512.1	0.03531	ACY71544.1	0.01473	BAG69075.1	0.06848
BAG69090.1	1.40E-04	BAG69076.1	0.00485	BAG69091.1	1.40E-04
ACY71542.1	0.0048	BAG69049.1	0.00466	BAG69077.1	1.40E-04
ACY71571.1	0.1406	ABD17646.1	1.40E-04	ABD17645.1	0.00921
ABD17647.1	0.06929	ABK32290.1	0.02322	ABK32258.1	0.01076
ABD17649.1	0.03635	ABD17648.1	0.08539	ADH04640.1	0.12611
ADH04659.1	0.12482	ABD17640.1	0.13413	YP_003267362.1	0.18921
ABD17641.1	0.09896	ABD17644.1	0.18403	YP_003267360.1	0.26917
ABD17642.1	0.02127	ABD17643.1	0.00981	CAD43448.1	0.08707
ACY71554.1	0.00476	CAL58683.1	1.40E-04	ACY71577.1	0.00458
ACY71552.1	1.50E-04	ABD17639.1	0.0568	ABD17638.1	1.50E-04
BAG69085.1	0.00962	ABD17637.1	0.01471	ACY71550.1	0.00503
BAG69073.1	1.40E-04	ACY71553.1	0.00494	ACY71540.1	1.40E-04
ZP_06769488.1	0.13181	BAH67451.1	0.119	AAZ94391.1	0.01865
YP_003493866.1	0.00917	BAH68013.1	0.26616	BAI44044.1	0.03108
BAI44045.1	0.05849	BAH67539.1	0.1224	ACZ54364.1	0.04082
ABB88521.1	0.02313	ADC68440.1	0.14796	BAD08358.1	0.05679
BAH68285.1	1.40E-04	BAH68116.1	0.00303	BAH68288.1	0.00619
ADC68450.1	0.14285	ADC68451.1	0.11621	BAH67295.1	0.12764
BAH67294.1	0.08684	ADC68472.1	0.00312	ADC68466.1	1.50E-04
ADC68475.1	0.00546	BAH67538.1	0.09042	BAH68006.1	0.08183
BAH67541.1	0.05061	BAH68042.1	0.06793	BAH67200.1	0.03666
BAH67553.1	0.01947	BAH68115.1	0.19371	BAH67388.1	0.12342
BAH67061.1	0.03335	BAH67853.1	0.03717	BAH68142.1	0.03573
ACS45379.1	0.00474	ACR61391.1	1.40E-04	ZP_05000637.1	0.08282
BAH67372.1	0.01952	BAH67105.1	0.02369	ZP_05517720.1	0.02125
ZP_05517721.1	0.02637	BAH66986.1	0.0102	BAH66951.1	0.01849
ACZ54345.1	0.09325	ACZ54348.1	0.15085	ACZ54347.1	0.02145
ACZ54346.1	1.40E-04	YP_003100464.1	0.21877	ACZ54303.1	0.0685
YP_001159599.1	0.02076	YP_712781.1	0.1944	YP_712780.1	0.10581
BAH67212.1	0.07877	BAH67430.1	0.09318	BAH68156.1	0.07625
BAH68253.1	0.19352	BAH67455.1	0.11398	BAH68048.1	0.10468

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YP_001852062.1	0.11168	ZP_06847129.1	0.05604	ZP_05228219.1	0.02123
YP_882293.1	1.50E-04	NP_960304.1	0.01659	ZP_05217076.1	0.00244
ZP_04752113.1	0.03984	YP_001850776.1	0.02876	ZP_05141116.1	0
ZP_03420117.1	0	ZP_03416215.1	0	ZP_03532164.1	0
ZP_05772422.1	0	ZP_04925186.1	0	NP_216177.1	0
NP_855341.1	0	ZP_03428473.1	0.00275	ZP_06509591.1	0
ZP_03536656.1	0	ZP_06517145.1	0.00369	YP_001850777.1	0.05436
ZP_04752033.1	0.05529	ZP_06847131.1	0.03739	ZP_05225901.1	0.03225
YP_882292.1	0.00541	ZP_05217075.1	1.40E-04	NP_960305.1	1.50E-04
AAF82077.1	1.40E-04	ZP_05768217.1	0.00545	ZP_03536657.1	0.02237
ZP_03532166.1	1.40E-04	NP_336155.1	0	ZP_03420118.1	0
NP_216178.1	0	ZP_03416214.1	0	YP_001287625.1	0
ZP_05772423.1	0	ZP_06517149.1	length	NP_855342.1	0
YP_977793.1	0	ZP_03432600.1	1.40E-04	ZP_06513130.1	0.00569
BAH66954.1	0.14332	ZP_06847686.1	0.09858	ZP_04752046.1	0.08488
ZP_06510017.1	0.00262	ZP_06521583.1	1.40E-04	ZP_06443379.1	1.40E-04
ZP_04751866.1	0.02786	ZP_06847687.1	0.04742		1.40E-04
ZP_03425336.1	0	ZP_05141522.1	0	ZP_06517546.1	0
ZP_06433293.1	0	ZP_06505377.1	0	ZP_06513536.1	0
ZP_06450386.1	0	ZP_06443378.1	1.40E-04	ZP_05219179.1	0.00711
NP_301229.1	0.02613	ZP_04750446.1	0.04437	YP_001850066.1	1.40E-04
YP_905915.1	0.00275	ZP_05765442.1	0	ZP_06438358.1	0
ZP_03429814.1	0	ZP_05773758.1	0	ZP_06451367.1	0
NP_856616.1	0	ZP_06455879.1	0	ZP_06514440.1	0
NP_217463.1	1.40E-04	AAA50929.1	1.40E-04	ZP_03417103.1	0
ZP_03533501.1	0	NP_337532.1	0	ZP_06506124.1	0
YP_003030964.1	0	ZP_06739442.1	0	ZP_03426313.1	0.00243
ZP_06434251.1	0.00382	YP_001848428.1	0.0033	YP_001848427.1	0.00219
YP_001851388.1	0.02545	YP_001851389.1	0.04526	ACZ54306.1	0.07752
BAH68201.1	0.0032	BAH67764.1	0.00953	BAH67879.1	0.00317
BAH68210.1	0.08938	BAI44057.1	0.05582	BAH67765.1	0.0133
BAH67761.1	1.60E-04	BAH68193.1	0.00295	BAH68185.1	0.00597
BAH68195.1	0.00302	BAH68228.1	0.02454	ZP_05512282.1	0.06987
ZP_05512279.1	0.11727	ZP_05512289.1	0.071	BAH67766.1	1.40E-04
BAH67771.1	0.00341	BAI44034.1	0.10061	ZP_05512278.1	0.06504
BAI44035.1	0.07339	BAH67751.1	0.04027	BAH67762.1	1.50E-04
BAH68239.1	0.02218	ZP_05512275.1	0.10544	BAH68219.1	0.18615
YP_003648396.1	0.29268	CAE45670.1	0.19477	BAH67472.1	0.16821
BAH67738.1	0.28542	YP_003117674.1	0.24982	YP_003117673.1	0.19264
BAH68280.1	0.35818	BAH67998.1	0.26829	ACZ54355.1	0.23931
ZP_06275819.1	0.25537	ZP_04608883.1	0.15174	ZP_05482463.1	0.17814
ZP_04696765.1	0	ZP_06587686.1	0	ZP_04711958.1	0
BAH68044.1	0.19032	ZP_05520482.1	0.02662	BAH67086.1	0.04685

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ZP_04608880.1	0.11443	ZP_04608881.1	0.11531	BAH67891.1	0.0906
ZP_05480587.1	0.25272	ZP_04711950.1	0	ZP_04696758.1	0
ZP_06587678.1	0	BAH66946.1	0.09211	BAH67508.1	0.01296
BAH67644.1	0.08064	BAH66945.1	0.00769	BAH67249.1	0.00261
BAH67385.1	0.02212	BAH67642.1	0.03576	BAH67504.1	0.16144
ZP_06275821.1	0.0644	BAH67956.1	0.22767	BAH67723.1	0.17675
BAH67720.1	0.14222	BAH68084.1	0.01009	BAH67422.1	1.40E-04
ADC68516.1	0.12039	ADC68513.1	0.05055	ADC68490.1	0.1227
ADC68471.1	0.20036	ADC68463.1	0.18716	BAH67128.1	0.04406
BAH67136.1	0.05034	BAH67893.1	0.21027	BAH68244.1	0.0327
BAH68264.1	0.06582	ZP_05482481.1	0.23325	ZP_05482464.1	0.12117
ADC68510.1	0.25372	BAH67225.1	0.19858	YP_710634.1	0.13599
CAB41040.1	0.02346	AAR16521.1	0.09591	BAH67273.1	0.08101
ZP_04700397.1	0	ZP_06589184.1	0	AAQ82561.1	0
ADC68489.1	0.01734	BAH68053.1	0.15751	ADC68477.1	0.11956
BAH68052.1	0.06898	BAH68122.1	0.07434	BAH67322.1	0.05485
ZP_06710511.1	0.06739	ZP_06710512.1	0.08337	BAH67215.1	0.06572
ZP_06710508.1	0.15952	BAH67084.1	0.10103	AAP45192.1	0
AAO61221.1	0	ABB86420.1	0.01271	ADC68480.1	0.18187
BAH68054.1	0.10704	AAO61200.1	0.1787	BAH67844.1	0.23977
ACZ54293.1	0.06485	BAH67635.1	0.05841	BAH67959.1	0.00304
BAH68297.1	0.00308	ACZ54294.1	0.08311	BAH67957.1	0.06478
ACZ54295.1	0.12282	CAA11037.1	0.11036	AAT68460.1	1.40E-04
YP_001536144.1	0.00454	AAT68463.1	0.00474	AAT68461.1	1.40E-04
CAA11038.1	0.0981	YP_001536145.1	0.00492	AAT68464.1	0.02381
BAH67465.1	0.01463	BAH68299.1	0.00625	BAH67961.1	1.40E-04
BAH67636.1	0.10963	BAH68298.1	1.40E-04	BAH67960.1	0.00308
BAH67466.1	0.10744	CAI30444.1	0.18299	ABB86422.1	0.01392
ABB86421.1	0.04188	AAP45193.1	0.02311	YP_001509108.1	0.1783
ZP_06414402.1	0.19055	BAH67217.1	0.1	ZP_06710509.1	length
ZP_06413765.1	0.14419	YP_001509109.1	0.10063	ZP_06417924.1	0.10115
ABB86423.1	0.01682	AAN63813.1	0.01063	ZP_04706936.1	0.05844
XP_001227954.1	2.23768	ZP_04691738.1	0	ZP_06582622.1	0
ZP_04706931.1	1.40E-04	BAF02927.1	0.17217	ADI04663.1	0.1419
ADC68501.1	0.14604	BAH67437.1	0.09844	BAH67235.1	0.01187
BAH67005.1	0.01291	BAI44058.1	0.24448	BAH67290.1	0.17444
BAH67133.1	0.21686	ZP_06283286.1	0.26629	BAH67338.1	0.1902
ABH08748.1	0.33786	BAH67819.1	0.18407	BAH67397.1	0.15455
BAH67820.1	0.15468	BAH67818.1	0.14044	ZP_04700404.1	0.02387
BAI44067.1	0.02096	BAH68196.1	0.29519	BAH68008.1	0.06701
BAH68045.1	0.05694	BAH67516.1	0.19242	ACZ54314.1	0.05836
ACZ54315.1	0.11063	ZP_05517704.1	0.16206	ZP_05000626.1	0.09019
BAH67978.1	0.04576	ZP_05517708.1	0.03275	ACZ54338.1	0.23931



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ACZ54321.1	0.0125	ACZ54322.1	0.03267	BAH66990.1	0.01874
BAH67063.1	0.03136	BAH67167.1	0.03486	BAH66992.1	0.00913
BAH67064.1	0.02215	BAH67092.1	1.40E-04	BAH68135.1	0.01258
BAH67705.1	0.14103	BAH67746.1	0.01419	BAH68091.1	0.01091
BAG85032.1	0.01907	CAQ64692.1	0.07636	ADC68485.1	0.03743
ADC68486.1	0.06132	BAH67568.1	0.17264	ZP_05514807.1	0.15173
ADC68473.1	0.21137	ADC68474.1	0.16247	ACN69991.1	0.19545
BAH67363.1	0.13387	BAH67365.1	0.10981	ADI04507.1	0.13456
BAH67029.1	0.14745	BAH67024.1	0.18661	BAH67376.1	0.07272
BAH68259.1	0.01073	BAH67025.1	0.00462	BAG85029.1	0
CAQ64689.1	0	ADI04505.1	0.10971	BAH67026.1	0.06198
BAH67027.1	0.0179	ZP_05511713.1	0.04748	BAH67741.1	0.05379
BAH67048.1	0.20556	BAH67046.1	0.15454	BAH67289.1	0.02065
BAH67288.1	0.01386	BAH67286.1	0.01692	BAH67285.1	0.01118
BAH67513.1	0	BAH68289.1	0	BAH67645.1	0.20398
ZP_06283324.1	0.13423	BAH68272.1	0.03435	BAH68273.1	0.02947
ZP_06283318.1	0.00575	ADC68442.1	0.01708	ADC68436.1	0.10621
BAH68080.1	0.08256	BAH68082.1	0.11149	BAH68081.1	0.13899
ZP_06283285.1	0.14166	CAE02605.1	0.11758	CAO85897.1	0.09038
ACZ54320.1	0.30272	BAH67774.1	0.18015	ZP_05511708.1	0.19971
BAH68131.1	0.0232	BAH66955.1	0.04754	BAH67160.1	0.03371
BAH67130.1	0.19178	AAC69332.1	0.30496	BAH67661.1	0.14895
BAH67682.1	0.02984	BAH67817.1	0.26217	ADI04508.1	0.2091
BAH67377.1	0.04455	ADI04506.1	0.0773	BAH67028.1	0.09932
ZP_06564496.1	1.40E-04	YP_001106334.1	1.40E-04	BAH67134.1	0.04257
ABB88534.1	0.05191	BAH68061.1	0.01292	BAH68256.1	0.01604
ZP_05512321.1	0.12776	BAH67407.1	0.09461	BAH68000.1	1.40E-04
BAH68040.1	0.01568	BAH67445.1	0.0642	BAH67920.1	0.00616
ABU25213.1	0.01413	ZP_04700414.1	0.00307	BAH67831.1	1.40E-04
BAH67826.1	0.00306	BAH67238.1	1.40E-04	ZP_04700413.1	0
ZP_06589195.1	0	BAH67300.1	0.10574	BAH67264.1	0.04291
ZP_05512318.1	0.14528	BAH67401.1	0.06174	BAH67008.1	0.15347
BAH67115.1	0.06926	BAH66989.1	0.04635	BAH67074.1	0.03593
BAH67291.1	0.22264	ZP_05520505.1	0.16283	ADI11525.1	1.50E-04
AAP42867.1	0.0081	AAO65807.1	0.20517	BAH67570.1	0.20482
BAH67530.1	0.04134	YP_001827588.1	1.60E-04	ZP_06283084.1	1.40E-04
BAH67040.1	0.00309	ADC68441.1	0.22074	ADC68435.1	0.05313
ADC68443.1	0.00587	BAH67528.1	0.03277	BAH67038.1	0.00238
CAE45671.1	0.20015	BAI44063.1	1.50E-04	BAH66965.1	0.11847
ADC68445.1	0.29579	ADC68495.1	0.18944	BAH67454.1	0.21547
BAH67658.1	0.08	BAH66926.1	0.14304	ADC68434.1	0.2133
BAI44048.1	0.23262	BAH68083.1	0.25256	ZP_04604291.1	0.15924
BAH67896.1	0.03659	BAI44066.1	0.10302	BAH67919.1	1.50E-04

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BAH67790.1	0.04118	BAH68051.1	1.40E-04	BAH68055.1	0.00315
BAH67742.1	0.19395	BAI44042.1	0.16177	BAH67427.1	0.03958
BAH67889.1	0.01203	YP_714267.1	0.3313	ACZ54352.1	0.1176
ACZ54354.1	0.19836	BAH57740.1	0.19376	ACZ54353.1	0.10661
BAH67760.1	0.18073	BAH68086.1	0.13677	ZP_04700416.1	0.04547
BAI44068.1	0.03666	BAH67909.1	0.05119	BAH67104.1	0.04618
BAH67256.1	0.01106	BAH66983.1	0.01234	BAH67404.1	0.01641
BAH67478.1	0.00743	YP_001537953.1	0.29364	BAH67499.1	0.21729
ZP_06397562.1	0.20971	BAH67312.1	0.17875	BAH67147.1	0.17552
BAH67691.1	0.23343	AAS46347.1	0.08117	NP_824069.1	0.03651
BAH67722.1	0.04655	BAH67725.1	0.1294	BAH67726.1	0.19458
ACZ54367.1	0.08527	ACZ54366.1	0.10443	BAI44054.1	0.18028
ABG02263.1	0.00515	BAC54914.1	0.00283	BAH67398.1	0.27002
ZP_06418134.1	0.06456	ZP_06418475.1	1.40E-04	BAA87896.1	0.2441
BAH66973.1	0.17775	ADC68470.1	0.20885	ADC68460.1	0.1062
CAI30441.1	0.20498	ZP_05514804.1	0.19439	ADC79637.1	0.11418
BAH67320.1	0.16291	BAH66964.1	0.20292	BAH67745.1	0.02325
BAH67775.1	0.03297	BAI44041.1	0.08491	BAH66975.1	0.03479
BAH67912.1	0.06765	BAH67088.1	0.01994	BAH67116.1	0.03807
BAH67112.1	0.04669	BAH67592.1	0.00313	BAH67505.1	1.40E-04
BAH67605.1	0.00312	BAH67609.1	1.40E-04	BAH67673.1	1.20E-04
BAH67676.1	0.00603	BAH67688.1	0.012	BAH68103.1	0.01657
BAH68209.1	0.041	ZP_06574372.1	1.40E-04	ZP_04683619.1	1.40E-04
BAH67168.1	0.00895	BAH67166.1	0.00634	BAH67165.1	0.00677
BAH66956.1	0.01512	BAH67343.1	0.09656	BAH67375.1	0.09276
BAH67022.1	0.05114	BAH68218.1	0.1697	ADC68481.1	0.03747
BAG85026.1	0.05752	BAH66957.1	0.25046		