

Table S13. GO enrichment analysis of expressed AC genes.

Class	GO_Name	GO_ID	P_value	EnrichmentScore	HitsGenesCountsInSelectedSet	HitsGenesCountsInBackground	AllGenesCountsInSelectedSet	AllGenesCountsInBackground	corrected p-value
Molecular function	ATP-dependent activity, acting on DNA	GO:0008094	1.28E-05	10.55	6	80	21	2955	0.0013
Biological process	meiotic chromosome segregation	GO:0045132	1.32E-05	10.67	6	80	24	3415	0.0037
Molecular function	obsolete purine NTP-dependent helicase activity	GO:0070035	2.34E-04	8.38	5	84	21	2955	0.0060
Molecular function	catalytic activity, acting on DNA	GO:0140097	2.31E-04	6.35	6	133	21	2955	0.0079
Molecular function	helicase activity	GO:0004386	3.98E-04	7.48	5	94	21	2955	0.0082
Biological process	reproductive process	GO:0022414	1.75E-04	3.58	10	397	24	3415	0.0089
Biological process	meiosis I cell cycle process	GO:0061982	2.07E-04	6.57	6	130	24	3415	0.0089
Biological process	meiosis I	GO:0007127	1.10E-04	7.36	6	116	24	3415	0.0102
Biological process	meiotic nuclear division	GO:0140013	2.77E-04	6.23	6	137	24	3415	0.0103
Biological process	nuclear division	GO:0000280	3.39E-04	4.20	8	271	24	3415	0.0105
Biological process	reproduction	GO:0000003	2.76E-04	3.40	10	419	24	3415	0.0110
Biological process	organelle fission	GO:0048285	4.04E-04	4.09	8	278	24	3415	0.0119
Molecular function	ATP hydrolysis activity	GO:0016887	0.00112	3.97	7	248	21	2955	0.0129
Biological process	negative regulation of mitotic cell cycle	GO:0045930	6.37E-04	6.84	5	104	24	3415	0.0162
Molecular function	ATP-dependent activity	GO:0140657	0.00186	3.65	7	270	21	2955	0.0192
Biological process	mitotic nuclear division	GO:0140014	0.00150	4.54	6	188	24	3415	0.0215
Biological process	DNA-templated DNA replication	GO:0006261	0.00188	5.39	5	132	24	3415	0.0228
Biological process	nuclear chromosome segregation	GO:0098813	0.00253	4.10	6	208	24	3415	0.0257
Biological process	negative regulation of cell cycle process	GO:0010948	0.00229	5.16	5	138	24	3415	0.0261
Biological process	DNA replication	GO:0006260	0.00236	5.12	5	139	24	3415	0.0264
Biological process	cytoskeleton organization	GO:0007010	0.00321	3.92	6	218	24	3415	0.0284
Biological process	chromosome segregation	GO:0007059	0.00329	3.90	6	219	24	3415	0.0287
Biological process	negative regulation of cell cycle	GO:0045786	0.00321	4.77	5	149	24	3415	0.0289
Biological process	meiotic cell cycle process	GO:1903046	0.00468	3.63	6	235	24	3415	0.0378
Molecular function	ribonucleoside triphosphate phosphatase activity	GO:0017111	0.00478	3.10	7	318	21	2955	0.0379
Molecular function	catalytic activity, acting on a nucleic acid	GO:0140640	0.00531	3.04	7	324	21	2955	0.0391
Molecular function	pyrophosphatase activity	GO:0016462	0.00695	2.90	7	340	21	2955	0.0448
Biological process	regulation of cell cycle phase transition	GO:1901987	0.00738	3.93	5	181	24	3415	0.0490