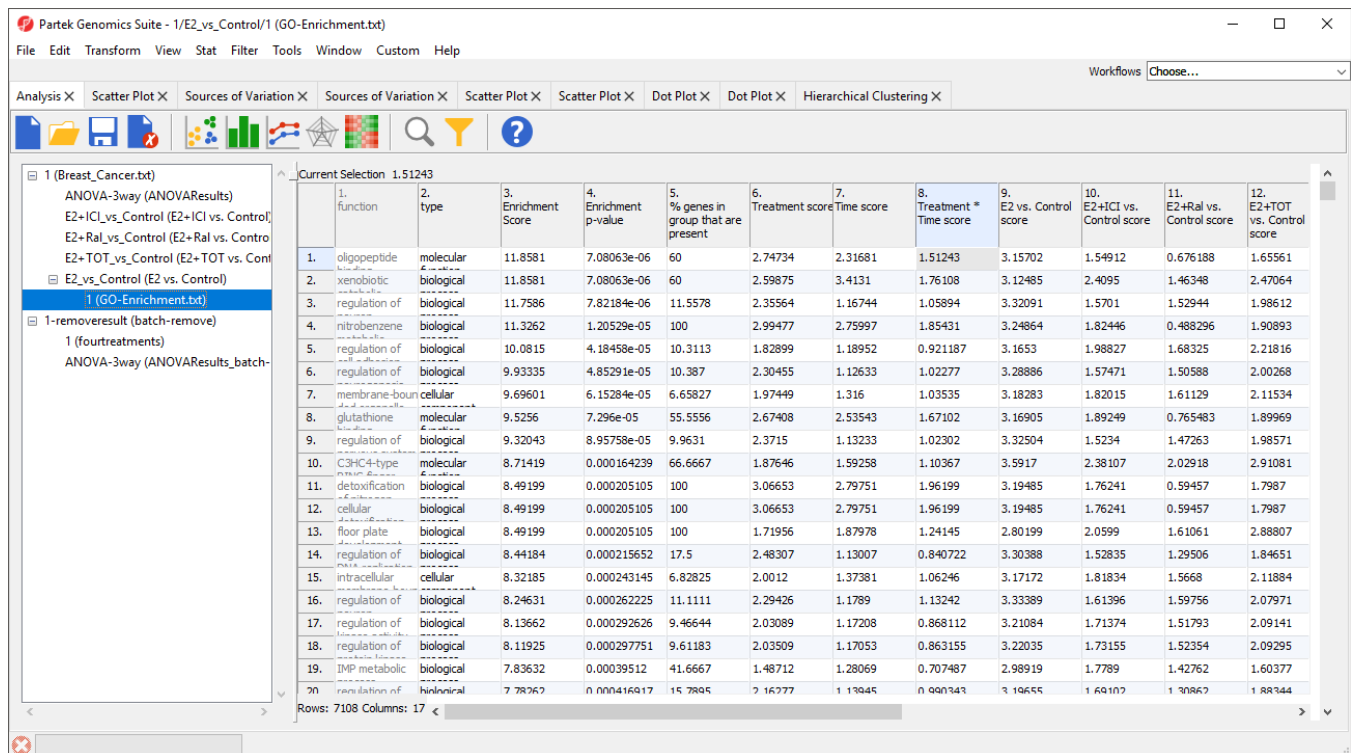


GO enrichment using a gene list

Gene Ontology (GO) enrichment analysis compares a gene list to lists of genes associated with biological processes, cellular compartments, and molecular functions to provide biological insights. Once a list of genes has been created, it is possible to see which GO terms the genes are associated with and whether any GO terms are significantly enriched in the gene list.

- Select the **E2 vs. Control** spreadsheet from the spreadsheet tree
- Select **Gene Set Analysis** from the *Biological Interpretation* section of the *Gene Expression* workflow
- Select **Next >** to continue with *GO Enrichment*
- Select **Next >** to continue with *1/E2_vs_Control (E2 vs. Control)*
- Select **Next >** to continue with default parameter settings
- Select **Next >** to continue with the default mapping file

A new spreadsheet *1 (GO-Enrichment.txt)* will open as a child spreadsheet of *E2 vs. Control* (Figure 1).



1. function	2. type	3. Enrichment Score	4. Enrichment p-value	5. % genes in group that are present	6. Treatment score	7. Time score	8. Treatment * Time score	9. E2 vs. Control score	10. E2+ICI vs. Control score	11. E2+Ral vs. Control score	12. E2+TOT vs. Control score
1. oligopeptide	molecular	11.8581	7.08063e-06	60	2.74734	2.31681	1.51243	3.15702	1.54912	0.676188	1.65561
2. xenobiotic	biological	11.8581	7.08063e-06	60	2.59875	3.4131	1.76108	3.12485	2.4095	1.46348	2.47064
3. regulation of	biological	11.7586	7.82184e-06	11.5578	2.35564	1.16744	1.05894	3.32091	1.5701	1.52944	1.98612
4. nitrobenzene	biological	11.3262	1.20529e-05	100	2.99477	2.75997	1.85431	3.24864	1.82446	0.488296	1.90893
5. regulation of	biological	10.0815	4.18458e-05	10.3113	1.82899	1.18952	0.921187	3.1653	1.98827	1.68325	2.21816
6. regulation of	biological	9.93335	4.85291e-05	10.387	2.30455	1.12633	1.02277	3.28886	1.57471	1.50588	2.00268
7. membrane-bound	cellular	9.69601	6.15284e-05	6.65827	1.97449	1.316	1.03535	3.18283	1.82015	1.61129	2.11534
8. glutathione	molecular	9.5256	7.296e-05	55.5556	2.67408	2.53543	1.67102	3.16905	1.89249	0.765483	1.89969
9. regulation of	biological	9.32043	8.95758e-05	9.9631	2.3715	1.13233	1.02302	3.32504	1.5234	1.47263	1.98571
10. C3HC4-type	molecular	8.71419	0.000164239	66.6667	1.87646	1.59258	1.10367	3.5917	2.38107	2.02918	2.91081
11. detoxification	biological	8.49199	0.000205105	100	3.06653	2.79751	1.96199	3.19485	1.76241	0.59457	1.7987
12. cellular	biological	8.49199	0.000205105	100	3.06653	2.79751	1.96199	3.19485	1.76241	0.59457	1.7987
13. floor plate	biological	8.49199	0.000205105	100	1.71956	1.87978	1.24145	2.80199	2.0599	1.61061	2.88807
14. regulation of	biological	8.44184	0.000215652	17.5	2.48307	1.13007	0.840722	3.30388	1.52835	1.29506	1.84651
15. intracellular	cellular	8.32185	0.000243145	6.82825	2.0012	1.37381	1.06246	3.17172	1.81834	1.5668	2.11884
16. regulation of	biological	8.24631	0.000262225	11.1111	2.29426	1.1789	1.13242	3.33389	1.61396	1.59756	2.07971
17. regulation of	biological	8.13662	0.000292626	9.46644	2.03089	1.17208	0.868112	3.21084	1.71374	1.51793	2.09141
18. regulation of	biological	8.11925	0.000297751	9.61183	2.03509	1.17053	0.863155	3.22035	1.73155	1.52354	2.09295
19. IMP metabolic	biological	7.83632	0.00039512	41.6667	1.48712	1.28069	0.707487	2.98919	1.7789	1.42762	1.60377
20. regulation of	biological	7.78762	0.000416917	15.7895	2.16777	1.13045	0.990343	3.19655	1.69102	1.30862	1.88344

Figure 3. GO Enrichment results spreadsheet

GO terms are shown in rows and are sorted by ascending enrichment p-value.

To visualize the results, we can launch the *Gene Ontology Browser*.

- Select **View** from the main tool bar
- Select **Gene Ontology Browser**

The *Gene Ontology Browser* will open in a new tab (Figure 2).

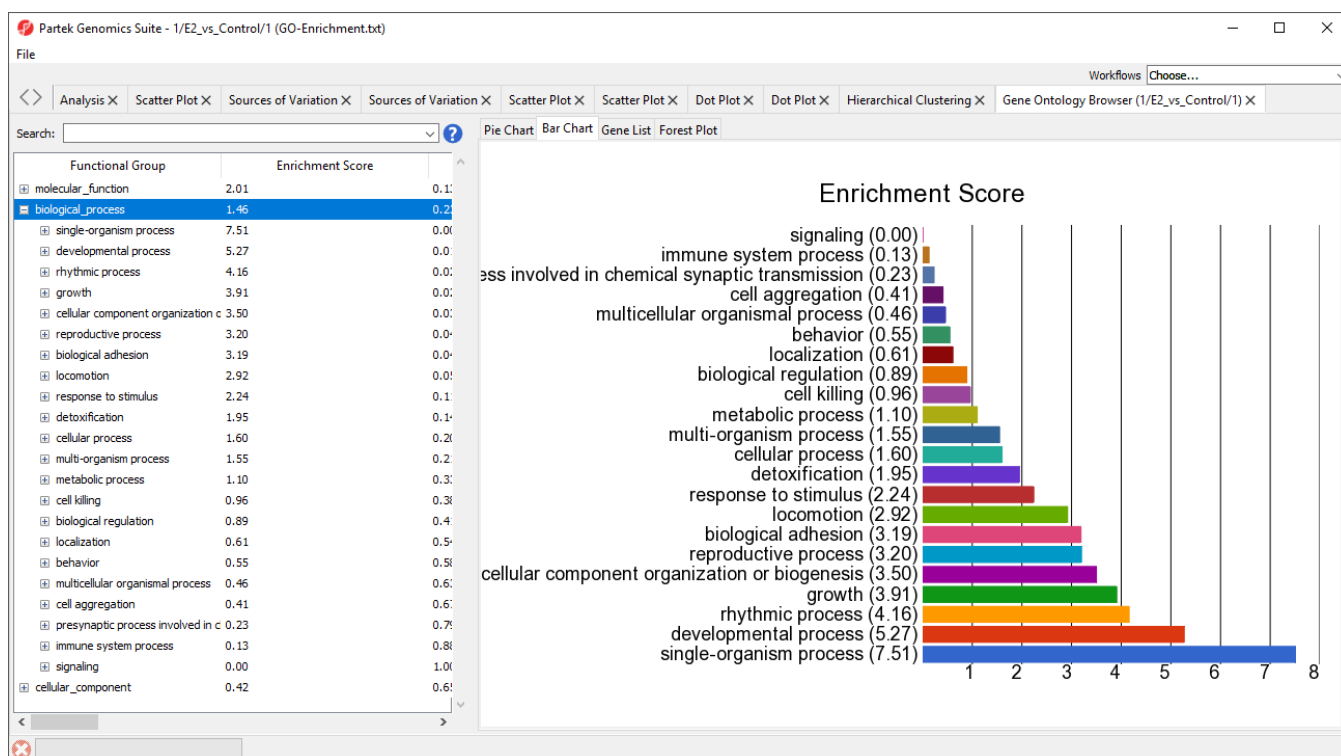


Figure 4. Viewing GO enrichment results in the Gene Ontology Browser

The bar chart shows the GO terms with the highest enrichment scores for the gene list.

To learn more about GO enrichment and using the *Gene Ontology Browser*, please consult the [Gene Ontology Enrichment](#) tutorial.

Additional Assistance

If you need additional assistance, please visit [our support page](#) to submit a help ticket or find phone numbers for regional support.



Your Rating:  Results:  43 rates