

User Manual of IBDIntegrate

October 2, 2023

IBDIntegrate is a data integration tool based on input gene/pathway list and selected data and comparisons.

Users began IBDIntegrate by selecting GENE or PATHWAY (redbox in Figure 1). If selecting GENE, two options for inputting interesting gene list are available (blue box). “Option 1” is to select the existing gene list from our database (we current provide three lists: chemokine, interleukin and TNF super family gene list). “Option 2” is to upload a txt file with gene symbol in each line. Then, users can query the datasets based on the disease, tissue, cell type, treatment and timepoint (green box). After clicking “CONFIRM SELECTIONS” button (black box), the selected datasets and all comparisons will be shown in the right panel (grey and darkblue boxes). Users can refine the datasets based on attributes and all comparisons related to the selected datasets. Finally, users should click “Run Integration” button to perform the data integration (brown box).

IBDIntegrate
Data Selection
Results Panel
Developed by Immunogen Computational Biology - GRC

REQUIRED

TARGET INPUT

☒ GENE ☐ PATHWAY

☐ Option 1 ☐ Option 2

Perform integration for predefined target list(s)

interleukin

Select diseases of interest

UC CD

OPTIONAL

Select tissues of interest

Select cell types of interest

Select treatments of interest

Infliximab

Select timepoints of interest

W0

CONFIRM SELECTIONS

- diseases - UC, CD
- sources -
- celltypes -
- treatments - Infliximab
- timepoints - W0

Data Selection

Guidelines

Choose the datasets that you would like to include in the integration analysis. Selected rows in the table correspond to datasets that will be included. By default all datasets that match the user specified options are selected. Deselecting datasets will filter the available options for comparisons. A given comparison (e.g. Responder vs NonResponder) may be present across multiple datasets. Selecting a row from the comparison table will include that type of comparison across all selected datasets that have the given comparison.

Note

We recommend selecting one or a few comparisons that pertain to your specific question as opposed to selecting all.

Datasets

id	dataset ID	disease	organism	experiment type	source
19	GSE12251	UC	Human	Microarray	Colon
21	GSE16879	CD,UC,Healthy	Human	Microarray	Colon,Ileum
22	GSE23597	UC	Human	Microarray	Colon
24	GSE107865	CD	Human	Microarray	Blood
33	GSE73661	UC,nonIBD	Human	Microarray	Colon

Showing 1 to 5 of 5 entries

Comparisons

comparison	group	number of datasets	nun
Infliximab, Responder vs Placebo	W0		1
Infliximab, Responder vs Placebo	W8		1
NonResponder vs Responder	---		2
NonResponder vs Responder	CD, Colon, W0		1
NonResponder vs Responder	CD, Colon, W4_6		1
NonResponder vs Responder	CD, Ileum, W0		1
NonResponder vs Responder	CD, Ileum, W4_6		1
NonResponder vs Responder	UC, Colon, W0		1
NonResponder vs Responder	UC, Colon, W4_6		1
NonResponder vs Responder	Infliximab, W0		2
NonResponder vs Responder	Infliximab, W8		1
NonResponder vs Responder	Infliximab, W4_6		1
NonResponder vs Responder	Vedolizumab, W0		1
NonResponder vs Responder	Vedolizumab, W4_6		1
UC, W0, NonResponder vs Healthy	Colon		1

Showing 11 to 26 of 41 entries

Run Integration

Figure 1. Data and comparison selection.

The integration results will be shown in the Results Panel. The gene list will be ranked based on the meta p values. Clicking on the triangle button in each row will show the details of this gene in all datasets.

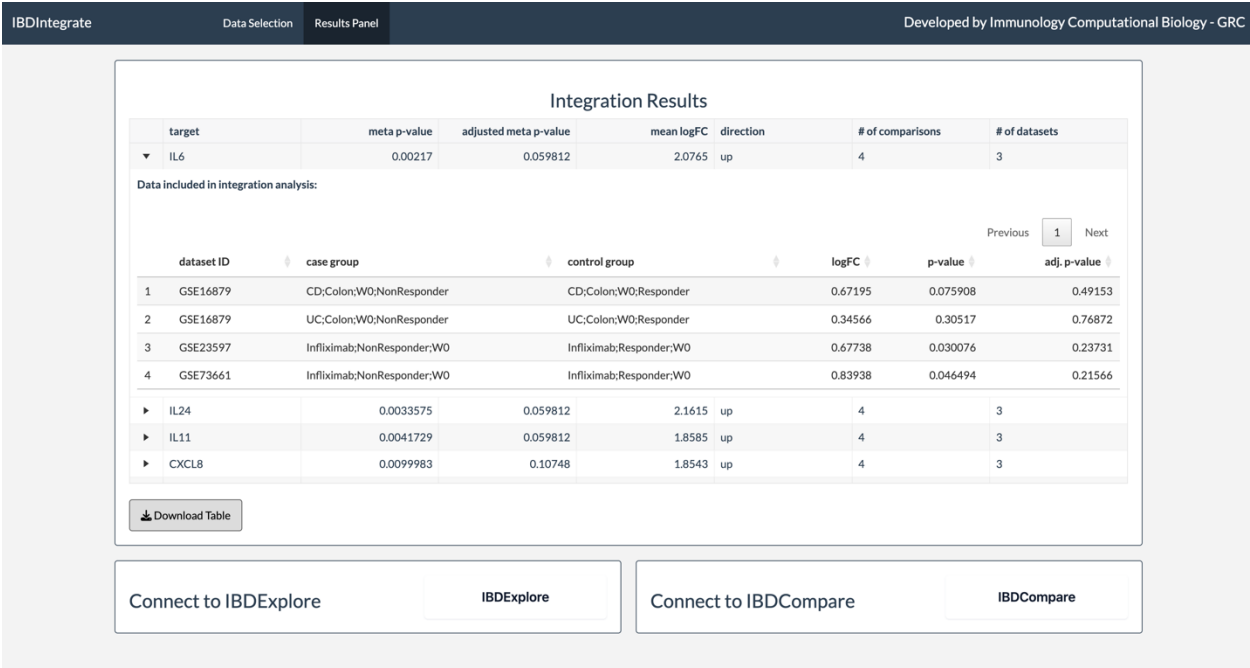


Figure 2. Results panel for data integration.