

Guide to Applying GeneCompete in 3 Simple Steps

1 Input

Gene expression data

Upload your file here

Drag and drop files here
Limit 200MB per file • CSV

Browse files

Apply sample data

Competition score (must be a column name)

logFC

Regulation

☒ Up-regulation

☐ Down-regulation

Strategy

☒ Union

☐ Intersect

threshold

1.00

0.005.00

Integration of multiple gene expression with GeneCompete

What is GeneCompete?

GeneCompete is a tool to combine heterogeneous gene expression datasets to order gene importance.

Quick start

GeneCompete requires the following input files.

1. Gene expression data: Multiple csv files where the first column is gene name. These data can be prepared by any tools.

Data example

Download example as zip

2. Competition score (must be a column name): The interested value that will be used as competing score (in the example is logFC).

3. Regulation: Select Up-regulation or Down-regulation.

1. Understanding Required Input

1. Gene expression data

The user can choose to upload multiple CSV files or click apply sample data.

First column must contain your interest entity

1 Input

Gene expression data

[Upload your file here](#)

Drag and drop files here
Limit 200MB per file • CSV

Browse files

Apply sample data

Competition score (must be a column name)

logFC

Regulation

☒ Up-regulation

☐ Down-regulation

Strategy

☒ Union

☐ Intersect

threshold

1.00

0.00

5.00

	adj.PVal	P.Value	t	B	logFC
TUBA3E	1.2e-42	3.1e-47	-21.4861	96.6406	-2.173
CEBPD	9.6e-42	5.1e-46	-20.9529	93.9039	-2.308
TUBA3C	1.1e-41	8.8e-46	-20.8493	93.3679	-2.0374
ZFP36	1.8e-41	1.9e-45	-20.7065	92.6265	-2.2395
RASD1	1.9e-41	2.4e-45	-20.6562	92.3648	-3.5143
TUBA3D	1.6e-40	2.6e-44	-20.2148	90.0531	-2.2049
CDC42EP4	8.6e-40	1.6e-43	-19.8769	88.2667	-1.2133
SERPINA3	1.8e-38	3.7e-42	-19.2995	85.179	-3.5614
AXUD1	1.6e-37	3.8e-41	-18.8782	82.8985	-2.1045
S100A9	8.2e-37	2.2e-40	-18.5621	81.173	-2.9145

1. Understanding Required Input

2. Competition score

The interested value that will be used as competing score (in the example is logFC).

1 Input

Gene expression data

[Upload your file here](#)

Drag and drop files here
Limit 200MB per file • CSV

Browse files

Apply sample data

Competition score (must be a column name)

logFC

Regulation

☒ Up-regulation

☐ Down-regulation

Strategy

☒ Union

☐ Intersect

threshold

1.00

0.005.00

	adj.P.Val	P.Value	t	B	logFC
TUBA3E	1.2e-42	3.1e-47	-21.4861	96.6406	-2.173
CEBPD	9.6e-42	5.1e-46	-20.9529	93.9039	-2.308
TUBA3C	1.1e-41	8.8e-46	-20.8493	93.3679	-2.0374
ZFP36	1.8e-41	1.9e-45	-20.7065	92.6265	-2.2395
RASD1	1.9e-41	2.4e-45	-20.6562	92.3648	-3.5143
TUBA3D	1.6e-40	2.6e-44	-20.2148	90.0531	-2.2049
CDC42EP4	8.6e-40	1.6e-43	-19.8769	88.2667	-1.2133
SERPINA3	1.8e-38	3.7e-42	-19.2995	85.179	-3.5614
AXUD1	1.6e-37	3.8e-41	-18.8782	82.8985	-2.1045
S100A9	8.2e-37	2.2e-40	-18.5621	81.173	-2.9145

1. Understanding Required Input

1 Input

Gene expression data

⬇ Upload your file here ⬇

Drag and drop files here
Limit 200MB per file • CSV

Browse files

Apply sample data

Competition score (must be a column name)

logFC

Regulation

☒ Up-regulation

☐ Down-regulation

Strategy

☒ Union

☐ Intersect

threshold

1.00

0.00 5.00

3. Regulation

- Up-regulation: The entity with higher score is the winner.
- Down-regulation: The entity with higher score is the winner.

1. Understanding Required Input

1 Input

Gene expression data

[↓ Upload your file here ↓](#)

Drag and drop files here
Limit 200MB per file • CSV

Browse files

Apply sample data

Competition score (must be a column name)

logFC

Regulation

☒ Up-regulation

☐ Down-regulation

Strategy

☒ Union

☐ Intersect

threshold

1.00

0.00

5.00

4. Strategy

- Union consider all entities from all datasets as players.
- Intersect focus only the overlapped entities.

For more information: <https://peerj.com/articles/cs-1686/>

5. Threshold

If the union strategy is selected, the number of entity can be large and consume computational time. Before ranking, datasets are filtered with **Competition score > (threshold)** in case of **up-regulation** and **Competition score < -(threshold)** for **down-regulation**.

2. Review your input and total number of entity

2 Preparing Input:

Preview uploaded data

Total number of file uploaded: 4

Total number of genes in dataset 1 is 14019

Total number of genes in dataset 2 is 8101

Total number of genes in dataset 3 is 13580

Total number of genes in dataset 4 is 11696



Number of genes:

871

Strategy:

Union

Regulation:

UP

logFC threshold:

1.0



**** We suggest a number of entities lower than 10000. ****

3 Ranking scores: 🏃

Select ranking method(s)

Keener × Win-loss × PageRank ×



Submit

Success! Here is your ranking score.

This is Up-regulation intersection ranking score

	Name(Win-loss)	Score(Win-loss)	Rank(Win-loss)	Name(Keener)	Score(Keener)	Rank(Keener)	Nan
120	SLITRK4	12,950	1	SLITRK4	0.0351	1	SLIT
893	IRX2	12,918	2	IRX2	0.035	2	IRX2
1,717	HSPA2	12,912	3	HSPA2	0.0349	3	HSP
1,145	SFRP4	12,911	4	SFRP4	0.0349	4	SFR
1,535	ST8SIA2	12,868	5	ST8SIA2	0.0348	5	ST8
2,397	PER3	12,834	6	PER3	0.0346	6	PER
39	DIO2	12,827	7	DIO2	0.0346	7	DIO
778	PLCE1	12,815	8	PLCE1	0.0346	9	PLC
2,568	BDNF	12,808	9	BDNF	0.0346	8	BDN
1,003	IER3	12,780	10	IER3	0.0345	10	IER3

Download data as CSV

3. Select ranking method(s)

You can select one or several ranking methods below:

- **Win-loss**
- **Massey**
- **Colley**
- **Keener**
- **Elo**
- **Markov**
- **PageRank**
- **Bi-PageRank**

The result table can be downloaded as CSV.

Thank you for visiting.