

Supplementary 1 - TF importance of Hepatocyte dataset with 9 states

March 31, 2020

1 TF importance in each state

state: 1	max importance: 10.0
state: 2	max importance: 16.0
state: 3	max importance: 10.0
state: 4	max importance: 16.0
state: 5	max importance: 12.0
state: 6	max importance: 11.0
state: 7	max importance: 14.0
state: 8	max importance: 12.0
state: 9	max importance: 12.0

Top 5 driver genes of states 1 :
['CEBPB', 'ATF5', 'CREB3L3', 'TSC22D1', 'PPARA']

Top 5 driver genes of states 2 :
['CEBPB', 'YBX1', 'ID3', 'ATF5', 'ZBTB20']

Top 5 driver genes of states 3 :
['CEBPB', 'YBX1', 'CREB3L3', 'ID2', 'ZBTB20']

Top 5 driver genes of states 4 :
['CEBPB', 'CEBPA', 'ATF5', 'CREB3L3', 'ZBTB20']

Top 5 driver genes of states 5 :
['CEBPB', 'YBX1', 'ATF5', 'CREB3L3', 'XBP1']

Top 5 driver genes of states 6 :
['CEBPB', 'YBX1', 'CEBPA', 'XBP1', 'ZBTB20']

Top 5 driver genes of states 7 :
['CEBPB', 'YBX1', 'JUND', 'XBP1', 'ZBTB20']

Top 5 driver genes of states 8 :
['CEBPB', 'YBX1', 'CEBPA', 'XBP1', 'PHF5A']

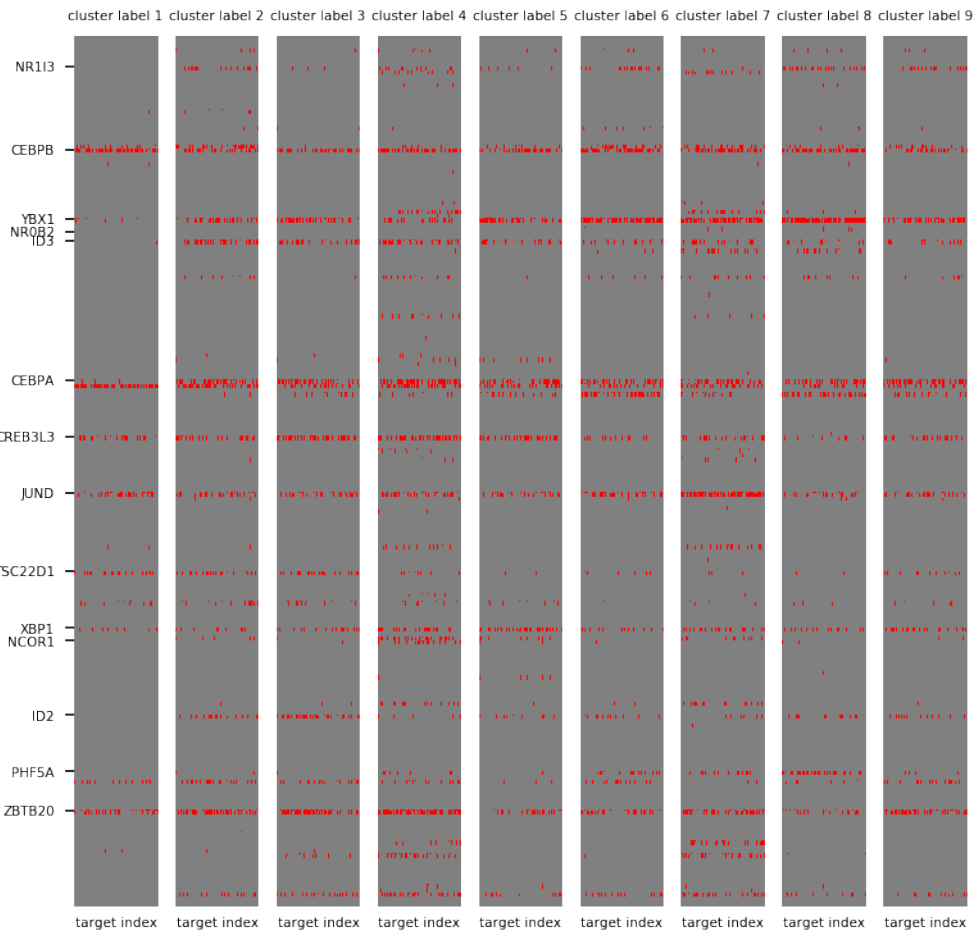
Top 5 driver genes of states 9 :
['NR1I3', 'CEBPB', 'YBX1', 'CEBPA', 'ZBTB20']

Union of all top 5 driver genes:
{'ZBTB20', 'ID2', 'TSC22D1', 'ATF5', 'PHF5A', 'CEBPB', 'CEBPA', 'XBP1', 'CREB3L3', 'YBX1', 'JUND', 'ID3', 'NR1I3', 'PPARA'}

2 Statistics of Average Importance in each state

state	mean(avg IM)	max(avg IM)	max(weight_mtx)	non-zero
1	0.0385	1.6470	10.0	3187
2	0.0901	1.6250	16.0	5164
3	0.0817	1.6880	10.0	4973
4	0.1889	3.5240	16.0	7819
5	0.0673	1.9780	12.0	4475
6	0.0724	2.0770	11.0	4660
7	0.1527	2.6870	14.0	7043
8	0.0922	3.0200	12.0	5348
9	0.0784	1.8050	12.0	4875

3 TF importance matrix



4 Importance dynamics matrix

