

Table S4. Rules generated from DT analysis.

Rules_0	passed counts:59
node_0: feature_name=SORT1	feature_id[66].value <= threshold=16.202244758605957
node_1: feature_name=RPL21P28	feature_id[85].value <= threshold=34.776649475097656
node_2: feature_name=GZMB	feature_id[255].value > threshold=117.4085464477539
node_6: feature_name=SIDT2	feature_id[492].value <= threshold=56.57046127319336
node_7: feature_name=TKT	feature_id[278].value <= threshold=724.8254699707031
Class: Patient with SARS-CoV-2 infection	
Rules_1	passed counts:47
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value <= threshold=687.6101684570312
node_19: feature_name=CDKN1A	feature_id[90].value <= threshold=65.20165252685547
node_20: feature_name=HMGN3	feature_id[35].value <= threshold=78.5991096496582
node_21: feature_name=CACNA1I	feature_id[491].value <= threshold=6.860291481018066
node_22: feature_name=ATP6V1D	feature_id[488].value <= threshold=24.75236225128174
Class: Patient with seasonal coronavirus	
Rules_2	passed counts:23
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value > threshold=687.6101684570312
node_38: feature_name=BAZ1A	feature_id[43].value > threshold=46.80592918395996
Class: Patient with bacterial pneumonia	

Rules_3	passed counts:15
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value <= threshold=687.6101684570312
node_19: feature_name=CDKN1A	feature_id[90].value > threshold=65.20165252685547
node_31: feature_name=NLRC5	feature_id[215].value > threshold=90.33353805541992
node_35: feature_name=DACH1	feature_id[158].value > threshold=0.1391642689704895
Class: Patient with influenza	
Rules_4	passed counts:11
node_0: feature_name=SORT1	feature_id[66].value <= threshold=16.202244758605957
node_1: feature_name=RPL21P28	feature_id[85].value > threshold=34.776649475097656
node_11: feature_name=RTN1	feature_id[494].value > threshold=7.122348785400391
Class: Healthy control	
Rules_5	passed counts:7
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value <= threshold=687.6101684570312
node_19: feature_name=CDKN1A	feature_id[90].value > threshold=65.20165252685547
node_31: feature_name=NLRC5	feature_id[215].value <= threshold=90.33353805541992
node_32: feature_name=YBX3	feature_id[442].value <= threshold=180.2283172607422
Class: Patient with SARS-CoV-2 infection	
Rules_6	passed counts:7
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value <= threshold=687.6101684570312

node_19: feature_name=CDKN1A	feature_id[90].value <= threshold=65.20165252685547
node_20: feature_name=HMGN3	feature_id[35].value > threshold=78.5991096496582
node_26: feature_name=CCNB2	feature_id[408].value <= threshold=2.7654906511306763
Class: Healthy control	
Rules_7	passed counts:6
node_0: feature_name=SORT1	feature_id[66].value <= threshold=16.202244758605957
node_1: feature_name=RPL21P28	feature_id[85].value <= threshold=34.776649475097656
node_2: feature_name=GZMB	feature_id[255].value <= threshold=117.4085464477539
node_3: feature_name=ACSL1	feature_id[167].value <= threshold=379.62129974365234
Class: Patient with seasonal coronavirus	
Rules_8	passed counts:4
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value <= threshold=687.6101684570312
node_19: feature_name=CDKN1A	feature_id[90].value <= threshold=65.20165252685547
node_20: feature_name=HMGN3	feature_id[35].value <= threshold=78.5991096496582
node_21: feature_name=CACNA1I	feature_id[491].value > threshold=6.860291481018066
Class: Patient with SARS-CoV-2 infection	
Rules_9	passed counts:2
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value <= threshold=687.6101684570312
node_19: feature_name=CDKN1A	feature_id[90].value > threshold=65.20165252685547
node_31: feature_name=NLRC5	feature_id[215].value <= threshold=90.33353805541992

node_32: feature_name=YBX3	feature_id[442].value > threshold=180.2283172607422
Class: Patient with seasonal coronavirus	
Rules_10	passed counts:2
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value <= threshold=687.6101684570312
node_19: feature_name=CDKN1A	feature_id[90].value <= threshold=65.20165252685547
node_20: feature_name=HMGN3	feature_id[35].value > threshold=78.5991096496582
node_26: feature_name=CCNB2	feature_id[408].value > threshold=2.7654906511306763
node_28: feature_name=MAFG	feature_id[46].value <= threshold=18.44084358215332
Class: Patient with SARS-CoV-2 infection	
Rules_11	passed counts:2
node_0: feature_name=SORT1	feature_id[66].value <= threshold=16.202244758605957
node_1: feature_name=RPL21P28	feature_id[85].value > threshold=34.776649475097656
node_11: feature_name=RTN1	feature_id[494].value <= threshold=7.122348785400391
node_12: feature_name=RPL26L1	feature_id[219].value > threshold=13.224897384643555
node_14: feature_name=TAP2	feature_id[458].value <= threshold=39.95484447479248
Class: Patient with SARS-CoV-2 infection	
Rules_12	passed counts:2
node_0: feature_name=SORT1	feature_id[66].value <= threshold=16.202244758605957
node_1: feature_name=RPL21P28	feature_id[85].value > threshold=34.776649475097656
node_11: feature_name=RTN1	feature_id[494].value <= threshold=7.122348785400391
node_12: feature_name=RPL26L1	feature_id[219].value <= threshold=13.224897384643555

Class: Patient with seasonal coronavirus	
Rules_13	passed counts:1
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value > threshold=687.6101684570312
node_38: feature_name=BAZ1A	feature_id[43].value <= threshold=46.80592918395996
Class: Patient with SARS-CoV-2 infection	
Rules_14	passed counts:1
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value <= threshold=687.6101684570312
node_19: feature_name=CDKN1A	feature_id[90].value > threshold=65.20165252685547
node_31: feature_name=NLRC5	feature_id[215].value > threshold=90.33353805541992
node_35: feature_name=DACH1	feature_id[158].value <= threshold=0.1391642689704895
Class: Patient with seasonal coronavirus	
Rules_15	passed counts:1
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value <= threshold=687.6101684570312
node_19: feature_name=CDKN1A	feature_id[90].value <= threshold=65.20165252685547
node_20: feature_name=HMGN3	feature_id[35].value > threshold=78.5991096496582
node_26: feature_name=CCNB2	feature_id[408].value > threshold=2.7654906511306763
node_28: feature_name=MAFG	feature_id[46].value > threshold=18.44084358215332
Class: Patient with seasonal coronavirus	

Rules_16	passed counts:1
node_0: feature_name=SORT1	feature_id[66].value > threshold=16.202244758605957
node_18: feature_name=HK3	feature_id[220].value <= threshold=687.6101684570312
node_19: feature_name=CDKN1A	feature_id[90].value <= threshold=65.20165252685547
node_20: feature_name=HMGN3	feature_id[35].value <= threshold=78.5991096496582
node_21: feature_name=CACNA1I	feature_id[491].value <= threshold=6.860291481018066
node_22: feature_name=ATP6V1D	feature_id[488].value > threshold=24.75236225128174
Class: Patient with SARS-CoV-2 infection	
Rules_17	passed counts:1
node_0: feature_name=SORT1	feature_id[66].value <= threshold=16.202244758605957
node_1: feature_name=RPL21P28	feature_id[85].value > threshold=34.776649475097656
node_11: feature_name=RTN1	feature_id[494].value <= threshold=7.122348785400391
node_12: feature_name=RPL26L1	feature_id[219].value > threshold=13.224897384643555
node_14: feature_name=TAP2	feature_id[458].value > threshold=39.95484447479248
Class: Patient with influenza	
Rules_18	passed counts:1
node_0: feature_name=SORT1	feature_id[66].value <= threshold=16.202244758605957
node_1: feature_name=RPL21P28	feature_id[85].value <= threshold=34.776649475097656
node_2: feature_name=GZMB	feature_id[255].value > threshold=117.4085464477539
node_6: feature_name=SIDT2	feature_id[492].value > threshold=56.57046127319336
Class: Patient with influenza	
Rules_19	passed counts:1

node_0: feature_name=SORT1	feature_id[66].value <= threshold=16.202244758605957
node_1: feature_name=RPL21P28	feature_id[85].value <= threshold=34.776649475097656
node_2: feature_name=GZMB	feature_id[255].value > threshold=117.4085464477539
node_6: feature_name=SIDT2	feature_id[492].value <= threshold=56.57046127319336
node_7: feature_name=TKT	feature_id[278].value > threshold=724.8254699707031
Class: Healthy control	
Rules_20	passed counts:1
node_0: feature_name=SORT1	feature_id[66].value <= threshold=16.202244758605957
node_1: feature_name=RPL21P28	feature_id[85].value <= threshold=34.776649475097656
node_2: feature_name=GZMB	feature_id[255].value <= threshold=117.4085464477539
node_3: feature_name=ACSL1	feature_id[167].value > threshold=379.62129974365234
Class: Patient with SARS-CoV-2 infection	