

Model COVID

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Experimental setup

Table 1: Linear treshhold used to binarize the channels

	IFN-Lambda	CD83	PD-L1	IFNa	CD80
Cohorte 1	4200	9900	574	437	574
Cohorte 2	4100	10000	1200	482	528
Cohorte 3	2600	11000	5200	579	623
Cohorte 4	2100	5200	1200	447	464
Cohorte 5	3100	5200	1200	623	623
Cohorte 6	2100	5200	388	447	667
Pilote 1	10000	2200	652	479	256
Pilote 2	2600	10000	2200	535	623

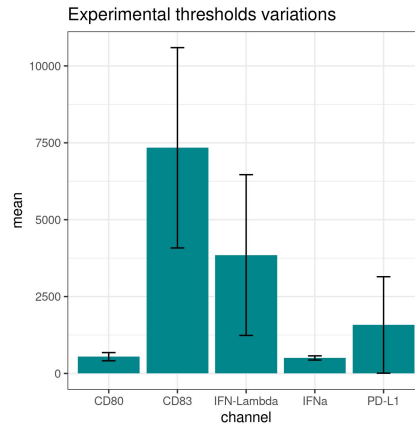


Figure 1: Experimental thresholds

IFN1	CD83	PDL1	IFNa
Min. :0.000	Min. :0.00000	Min. :0.0000	Min. :0.00000
1st Qu.:0.000	1st Qu.:0.00000	1st Qu.:0.0000	1st Qu.:0.00000
Median :0.000	Median :0.00000	Median :0.0000	Median :0.00000
Mean :0.102	Mean :0.07435	Mean :0.2532	Mean :0.01763
3rd Qu.:0.000	3rd Qu.:0.00000	3rd Qu.:1.0000	3rd Qu.:0.00000
Max. :1.000	Max. :1.00000	Max. :1.0000	Max. :1.00000
CD80	Patient	Cohorte	Activation
Min. :0.00000	Length:219346	Length:219346	Length:219346
1st Qu.:0.00000	Class :character	Class :character	Class :character
Median :0.00000	Mode :character	Mode :character	Mode :character
Mean :0.06908			
3rd Qu.:0.00000			
Max. :1.00000			
Severity	Status	perc_pDCs	
Min. :0.0000	Length:219346	Min. : 0.700	
1st Qu.:0.0000	Class :character	1st Qu.: 4.150	
Median :0.0000	Mode :character	Median : 7.730	
Mean :0.5773		Mean : 8.254	
3rd Qu.:1.0000		3rd Qu.:10.700	
Max. :2.0000		Max. :28.000	

	Patient	Cohorte	Status	Activation	pDCs	nCells	IFN1	CD83	PDL1	IFNa	CD80
27	AS-0030_pDC_A1	Cohorte 4	mild	Mock	7.75	441	13.83	4.99	1.13	0.23	1.3
41	AS-0030_pDC_A2	Cohorte 4	mild	SARS	22.20	1016	37.80	46.75	16.63	32.09	0.7
25	AS-0030_pDC_A3	Cohorte 4	mild	Agonist	13.10	743	55.32	17.63	48.86	0.81	4.7
67	AS-0030_pDC_B1	Cohorte 4	mild	Mock	5.39	237	19.41	1.69	0.84	0.42	2.9
81	AS-0030_pDC_B2	Cohorte 4	mild	SARS	9.07	381	10.76	6.56	2.10	2.89	3.4
109	AS-0030_pDC_B3	Cohorte 4	mild	Agonist	14.90	585	65.98	10.60	40.68	0.51	24.6
101	AS-0030_pDC_C1	Cohorte 4	mild	Mock	7.69	98	10.20	10.20	3.06	3.06	10.2
20	AS-0030_pDC_C2	Cohorte 4	mild	SARS	14.20	120	20.83	6.67	3.33	2.50	6.6
68	AS-0030_pDC_D1	Cohorte 4	mild	Mock	11.70	526	3.42	0.76	2.47	0.19	4.9
63	AS-0030_pDC_D2	Cohorte 4	mild	SARS	25.60	1399	28.59	14.80	0.93	11.29	0.7
47	AS-0030_pDC_D3	Cohorte 4	mild	Agonist	14.70	1062	14.78	9.98	39.92	0.19	9.8
115	AS-0030_pDC_E1	Cohorte 4	mild	Mock	5.70	939	13.10	2.56	6.60	0.32	8.5
82	AS-0030_pDC_E2	Cohorte 4	mild	SARS	8.42	917	9.71	5.23	6.11	1.96	8.6
126	AS-0030_pDC_E3	Cohorte 4	mild	Agonist	8.95	1632	24.02	9.99	29.96	0.06	6.1
116	BC_HV2_pDC_I1	Cohorte 2	healthy	Mock	3.40	1045	1.63	3.92	10.72	0.77	11.2
19	BC_HV2_pDC_I2	Cohorte 2	healthy	SARS	5.84	1846	3.68	5.96	4.28	6.23	3.1
107	BC_HV2_pDC_I3	Cohorte 2	healthy	Agonist	4.66	2009	0.45	8.01	92.83	0.25	7.5
85	BRU_Chrr_pDC_F1	Cohorte 2	severe	Mock	1.62	147	4.76	4.08	3.40	2.04	7.4
100	BRU_Chrr_pDC_F2	Cohorte 2	severe	SARS	1.26	184	1.63	0.54	13.04	5.43	15.2
30	BRU_Chrr_pDC_F3	Cohorte 2	severe	Agonist	0.88	341	0.59	3.81	12.90	1.47	6.1
36	BV_HV1_pDC_J1	Cohorte 3	healthy	Mock	9.24	9819	0.32	2.12	1.18	0.15	5.1
108	BV_HV1_pDC_J2	Cohorte 3	healthy	SARS	10.40	12635	51.82	2.19	0.86	0.66	4.8
127	BV_HV1_pDC_J3	Cohorte 3	healthy	Agonist	10.70	11477	34.50	3.13	27.89	0.17	3.1
56	CHA_Mah_pDC_F1	Cohorte 1	severe	Mock	2.78	3523	4.85	1.73	14.33	0.11	14.2
62	CHA_Mah_pDC_F2	Cohorte 1	severe	SARS	4.32	3394	0.53	2.30	13.82	0.27	14.2
64	CHA_Mah_pDC_F3	Cohorte 1	severe	Agonist	2.99	2426	8.45	10.84	35.20	0.91	9.2
76	EFS_P1_0901_pDC_3	Pilote 1	healthy	Mock	8.14	987	8.31	12.97	4.36	0.00	4.7
98	EFS_P1_0901_pDC_4	Pilote 1	healthy	SARS	9.61	775	1.68	8.77	3.35	2.32	2.9
34	EFS_P1_0901_pDC_5	Pilote 1	healthy	Agonist	8.73	1184	1.86	54.90	92.74	0.17	7.1
111	EFS_P1_0930_pDC_6	Pilote 1	healthy	Mock	16.20	932	3.00	3.76	2.25	0.00	2.4

	Patient	Cohorte	Status	Activation	pDCs	nCells	IFN γ	CD83	PDL1	IFN α	CD8 α
103	EFS_P1_0930_pDC_7	Pilote 1	healthy	SARS	15.80	1117	9.76	20.32	7.25	14.68	2.14
7	EFS_P1_0930_pDC_8	Pilote 1	healthy	Agonist	7.65	1011	1.09	46.39	95.55	0.79	25.51
106	EFS_P2_0901_pDC_4	Pilote 2	healthy	SARS	9.03	203	3.45	13.30	1.97	9.36	1.97
73	EFS_P2_1112_pDC_8	Pilote 2	healthy	Mock	25.70	652	0.31	1.38	26.84	0.46	3.61
53	EFS_P2_1112_pDC_9	Pilote 2	healthy	SARS	28.00	814	2.70	11.06	39.56	6.51	2.51
132	GC-0017_pDC_A1	Cohorte 3	mild	Mock	3.09	307	0.33	3.26	0.00	0.33	3.91
96	GC-0017_pDC_A2	Cohorte 3	mild	SARS	3.25	316	3.80	6.96	0.63	2.22	6.31
78	GC-0017_pDC_A3	Cohorte 3	mild	Agonist	5.38	630	10.95	5.08	6.98	1.75	14.21
99	GC-0017_pDC_B1	Cohorte 3	mild	Mock	1.66	179	0.00	5.03	0.56	1.68	5.51
21	GC-0017_pDC_B2	Cohorte 3	mild	SARS	2.17	262	0.38	4.58	0.38	2.67	8.01
125	GC-0017_pDC_B3	Cohorte 3	mild	Agonist	1.80	323	0.31	3.10	2.48	2.79	15.41
2	GC-0017_pDC_C1	Cohorte 3	mild	Mock	2.87	292	0.00	4.45	0.00	2.40	5.81
3	GC-0017_pDC_C2	Cohorte 3	mild	SARS	4.16	633	0.16	4.27	1.26	2.05	6.61
66	GC-0017_pDC_C3	Cohorte 3	mild	Agonist	5.28	968	0.72	8.57	24.07	0.93	8.61
136	GC-0017_pDC_E1	Cohorte 3	mild	Mock	3.86	1612	0.50	5.09	0.87	1.05	7.51
14	GC-0017_pDC_E2	Cohorte 3	mild	SARS	4.50	2201	0.14	3.09	0.27	0.45	5.41
71	GC-0017_pDC_E3	Cohorte 3	mild	Agonist	4.25	3229	2.14	2.88	9.97	0.37	4.21
137	GC-0038_pDC_A1	Cohorte 2	mild	Mock	2.28	441	9.30	17.01	7.48	1.81	9.31
72	GC-0038_pDC_A2	Cohorte 2	mild	SARS	2.96	428	6.54	15.89	6.78	3.04	5.81
8	GC-0038_pDC_A3	Cohorte 2	mild	Agonist	2.29	552	4.35	4.53	23.19	0.36	7.71
28	GC-0038_pDC_B1	Cohorte 2	mild	Mock	3.84	458	1.97	11.57	5.90	1.75	8.71
4	GC-0038_pDC_B2	Cohorte 2	mild	SARS	5.32	648	2.16	16.36	5.09	6.48	5.71
123	GC-0038_pDC_B3	Cohorte 2	mild	Agonist	5.54	718	20.19	10.58	60.03	0.42	16.51
122	GC-0038_pDC_C1	Cohorte 2	mild	Mock	6.34	819	1.71	7.20	5.86	0.37	7.81
35	GC-0038_pDC_C2	Cohorte 2	mild	SARS	8.07	1240	1.37	8.87	9.52	4.60	5.61
121	GC-0038_pDC_C3	Cohorte 2	mild	Agonist	4.92	1353	32.67	14.63	61.35	0.44	10.41
129	GC-0038_pDC_D1	Cohorte 2	mild	Mock	6.93	962	0.62	6.55	5.30	0.31	6.21
58	GC-0038_pDC_D2	Cohorte 2	mild	SARS	6.54	1185	3.97	12.15	8.35	7.26	5.81
49	GC-0038_pDC_D3	Cohorte 2	mild	Agonist	6.98	1235	1.13	11.66	72.31	0.49	8.91
104	HD_3M31_pDC_K1	Cohorte 5	healthy	Mock	6.23	1268	0.08	4.34	8.60	0.39	7.11
9	HD_3M31_pDC_K2	Cohorte 5	healthy	SARS	9.78	1504	0.33	8.78	13.83	0.53	12.71
133	HD_3M31_pDC_K3	Cohorte 5	healthy	Agonist	5.66	1701	1.65	20.75	60.08	0.76	7.21
119	HD_6M20_pDC_H1	Cohorte 1	healthy	Mock	11.40	1428	1.19	3.71	7.35	0.84	7.91
69	HD_6M20_pDC_H2	Cohorte 1	healthy	SARS	13.80	1524	1.12	5.45	6.82	0.85	7.41
51	HD_6M20_pDC_H3	Cohorte 1	healthy	Agonist	13.60	1494	2.28	4.69	68.34	0.74	7.91
113	HD_EF9S_pDC_K1	Cohorte 6	healthy	Mock	4.25	3691	1.87	2.33	27.85	1.00	17.21
112	HD_EF9S_pDC_K2	Cohorte 6	healthy	SARS	6.43	4386	2.37	4.56	20.95	1.14	9.61
131	HD_EF9S_pDC_K3	Cohorte 6	healthy	Agonist	4.15	3401	0.53	15.29	56.34	2.41	9.01
93	HOU_ED_pDC_F1	Cohorte 3	severe	Mock	1.60	1812	1.05	2.10	0.00	1.16	5.61
120	HOU_ED_pDC_F2	Cohorte 3	severe	SARS	1.52	2065	1.21	2.18	0.34	1.31	6.31
59	HOU_ED_pDC_F3	Cohorte 3	severe	Agonist	2.87	3466	2.34	3.92	31.07	0.61	3.61
32	HOU_ED_pDC_G1	Cohorte 3	severe	Mock	1.47	1731	0.46	0.92	0.23	0.46	9.51
135	HOU_ED_pDC_G2	Cohorte 3	severe	SARS	1.29	2530	3.24	0.47	0.71	0.95	14.71
37	HOU_ED_pDC_G3	Cohorte 3	severe	Agonist	2.01	3150	1.87	2.13	26.25	0.70	3.51
44	HOU_ED_pDC_H1	Cohorte 3	severe	Mock	1.52	929	0.11	1.08	0.22	1.18	6.61
54	HOU_ED_pDC_H2	Cohorte 3	severe	SARS	0.78	662	0.00	1.06	0.45	0.45	7.51
48	HOU_ED_pDC_H3	Cohorte 3	severe	Agonist	0.98	1524	1.90	2.69	13.85	1.18	4.41
124	HV_29_pDC_J1	Cohorte 4	healthy	Mock	9.05	673	1.63	1.78	3.27	0.45	4.91
42	HV_29_pDC_J2	Cohorte 4	healthy	SARS	9.66	1338	18.16	4.78	2.09	2.62	4.01
24	HV_29_pDC_J3	Cohorte 4	healthy	Agonist	10.60	2177	35.42	11.85	50.80	0.18	7.11
86	HV_F23_pDC_L1	Cohorte 6	healthy	Mock	5.41	1002	7.29	4.89	17.66	2.99	11.11
94	HV_F23_pDC_L2	Cohorte 6	healthy	SARS	4.25	850	0.71	3.76	15.65	2.94	8.11

	Patient	Cohorte	Status	Activation	pDCs	nCells	IFN1	CD83	PDL1	IFNa	CD8a
39	Hu3_1_pDC_G1	Cohorte 1	healthy	Mock	13.50	5690	0.74	1.18	8.93	0.16	5.73
22	Hu3_1_pDC_G2	Cohorte 1	healthy	SARS	13.80	5443	0.51	3.55	10.80	3.69	2.30
105	Hu3_1_pDC_G3	Cohorte 1	healthy	Agonist	10.90	5046	0.57	4.00	80.60	0.40	3.30
40	Hu3_2_pDC_H1	Cohorte 2	healthy	Mock	15.70	3045	0.30	2.43	21.08	0.13	5.90
0	Hu3_2_pDC_H2	Cohorte 2	healthy	SARS	23.30	6617	5.27	10.40	34.65	12.44	1.40
29	Hu3_2_pDC_H3	Cohorte 2	healthy	Agonist	16.50	4383	0.23	5.45	85.65	0.27	5.00
57	Hu3_3_pDC_I1	Cohorte 3	healthy	Mock	0.99	766	0.26	4.31	0.78	2.22	12.40
17	Hu3_3_pDC_I2	Cohorte 3	healthy	SARS	1.36	1177	1.53	2.89	0.76	1.95	14.90
33	Hu3_3_pDC_I3	Cohorte 3	healthy	Agonist	2.78	1817	1.21	5.23	15.41	0.94	6.60
75	Hu3_4_pDC_I1	Cohorte 4	healthy	Mock	3.92	384	2.86	4.43	6.51	0.52	2.00
18	Hu3_4_pDC_I2	Cohorte 4	healthy	SARS	13.00	2469	36.49	12.72	9.72	4.58	1.00
61	Hu3_4_pDC_I3	Cohorte 4	healthy	Agonist	13.60	2995	56.13	18.46	72.25	0.17	6.50
83	Hu3_5_pDC_J1	Cohorte 5	healthy	Mock	7.88	1938	1.24	11.20	14.65	0.36	6.30
102	Hu3_5_pDC_J2	Cohorte 5	healthy	SARS	13.60	3028	0.83	7.46	11.20	2.44	2.40
88	Hu3_5_pDC_J3	Cohorte 5	healthy	Agonist	10.00	4357	13.38	20.95	79.64	0.11	4.10
90	LD-0175_pDC_A1	Cohorte 5	mild	Mock	1.01	287	0.35	14.98	10.10	4.18	13.20
134	LD-0175_pDC_A2	Cohorte 5	mild	SARS	0.74	381	0.00	15.75	6.30	1.84	9.40
92	LD-0175_pDC_A3	Cohorte 5	mild	Agonist	1.90	519	0.39	12.91	26.40	1.16	4.60
26	LD-0175_pDC_B1	Cohorte 5	mild	Mock	7.40	1390	0.14	10.29	6.33	0.22	6.10
23	LD-0175_pDC_B2	Cohorte 5	mild	SARS	10.90	1945	0.15	13.11	3.08	0.67	2.90
65	LD-0175_pDC_B3	Cohorte 5	mild	Agonist	7.73	2349	54.41	27.16	62.62	0.17	12.50
84	LD-0175_pDC_C1	Cohorte 5	mild	Mock	5.26	717	0.28	7.53	4.88	0.98	5.30
12	LD-0175_pDC_C2	Cohorte 5	mild	SARS	7.57	646	0.00	6.81	2.48	0.00	2.70
110	LD-0175_pDC_C3	Cohorte 5	mild	Agonist	5.46	1161	0.26	17.23	59.69	0.34	10.50
70	LD-0175_pDC_D1	Cohorte 5	mild	Mock	1.94	246	1.63	4.47	8.54	3.25	8.50
128	LD-0175_pDC_D2	Cohorte 5	mild	SARS	2.01	249	0.00	4.42	8.84	0.80	8.80
15	LD-0175_pDC_D3	Cohorte 5	mild	Agonist	3.48	658	0.91	19.76	55.62	0.61	8.30
5	OZBE_pDC_I1	Cohorte 5	severe	Mock	1.14	126	0.79	7.14	7.14	3.17	10.30
6	OZBE_pDC_I2	Cohorte 5	severe	SARS	1.15	110	0.91	2.73	10.00	1.82	10.00
118	PD-0041_pDC_A1	Cohorte 1	mild	Mock	1.17	945	0.74	5.50	8.25	1.69	9.50
16	PD-0041_pDC_A2	Cohorte 1	mild	SARS	1.31	1002	0.50	8.78	6.99	0.80	9.00
77	PD-0041_pDC_A3	Cohorte 1	mild	Agonist	1.66	1154	1.99	3.38	10.31	0.95	5.70
79	PD-0041_pDC_B1	Cohorte 1	mild	Mock	2.80	662	33.99	10.73	7.70	2.57	8.00
11	PD-0041_pDC_B2	Cohorte 1	mild	SARS	2.72	695	0.00	7.34	7.19	0.14	6.10
114	PD-0041_pDC_B3	Cohorte 1	mild	Agonist	2.25	867	1.15	6.23	37.25	1.50	7.00
38	PD-0041_pDC_C1	Cohorte 1	mild	Mock	3.07	485	0.82	0.62	9.69	1.65	11.70
45	PD-0041_pDC_C2	Cohorte 1	mild	SARS	3.84	610	0.00	5.90	5.90	0.82	6.30
13	PD-0041_pDC_C3	Cohorte 1	mild	Agonist	2.64	844	1.66	4.27	38.74	0.47	5.60
55	PD-0041_pDC_D1	Cohorte 1	mild	Mock	5.73	1136	1.14	3.52	6.34	0.53	7.30
1	PD-0041_pDC_D2	Cohorte 1	mild	SARS	5.83	1494	0.00	8.10	8.10	0.47	4.40
89	PD-0041_pDC_D3	Cohorte 1	mild	Agonist	3.57	1317	0.68	4.71	68.34	0.99	5.70
60	PS-0029_pDC_A1	Cohorte 6	mild	Mock	1.97	707	10.89	9.48	15.84	1.70	8.60
50	PS-0029_pDC_A2	Cohorte 6	mild	SARS	2.90	762	1.71	13.12	19.03	1.71	8.50
138	PS-0029_pDC_A3	Cohorte 6	mild	Agonist	5.74	1185	0.34	15.78	67.93	2.70	14.70
97	PS-0029_pDC_C1	Cohorte 6	mild	Mock	2.20	764	3.40	3.27	17.93	1.83	9.60
31	PS-0029_pDC_C2	Cohorte 6	mild	SARS	3.03	892	1.12	4.82	16.70	2.02	10.00
52	PS-0029_pDC_C3	Cohorte 6	mild	Agonist	3.72	1499	0.07	20.01	74.52	2.74	11.40
117	PS-0029_pDC_E1	Cohorte 6	mild	Mock	3.40	856	3.97	4.44	13.90	3.86	8.50
43	PS-0029_pDC_E2	Cohorte 6	mild	SARS	4.31	1026	2.14	3.31	13.74	2.05	9.00
46	PS-0029_pDC_E3	Cohorte 6	mild	Agonist	5.59	1789	0.39	18.84	70.82	1.29	9.50
74	PS-0029_pDC_F1	Cohorte 6	mild	Mock	3.91	1593	5.08	4.52	18.08	4.02	12.80
95	PS-0029_pDC_F2	Cohorte 6	mild	SARS	4.61	1831	3.50	7.10	13.54	2.95	9.60

	Patient	Cohorte	Status	Activation	pDCs	nCells	IFNl	CD83	PDL1	IFNa	CD8a
91	PS-0029_pDC_F3	Cohorte 6	mild	Agonist	4.24	2125	0.14	12.19	62.12	0.99	10.1
10	RESU_pDC_H1	Cohorte 6	severe	Mock	1.23	333	11.71	3.00	30.33	4.50	19.5
80	RESU_pDC_H2	Cohorte 6	severe	SARS	0.96	317	9.78	3.79	40.06	5.05	30.6
87	RESU_pDC_I1	Cohorte 6	severe	Mock	0.70	330	9.39	3.64	45.76	8.18	35.4
130	RESU_pDC_I2	Cohorte 6	severe	SARS	0.99	273	14.65	2.20	36.63	5.86	32.2

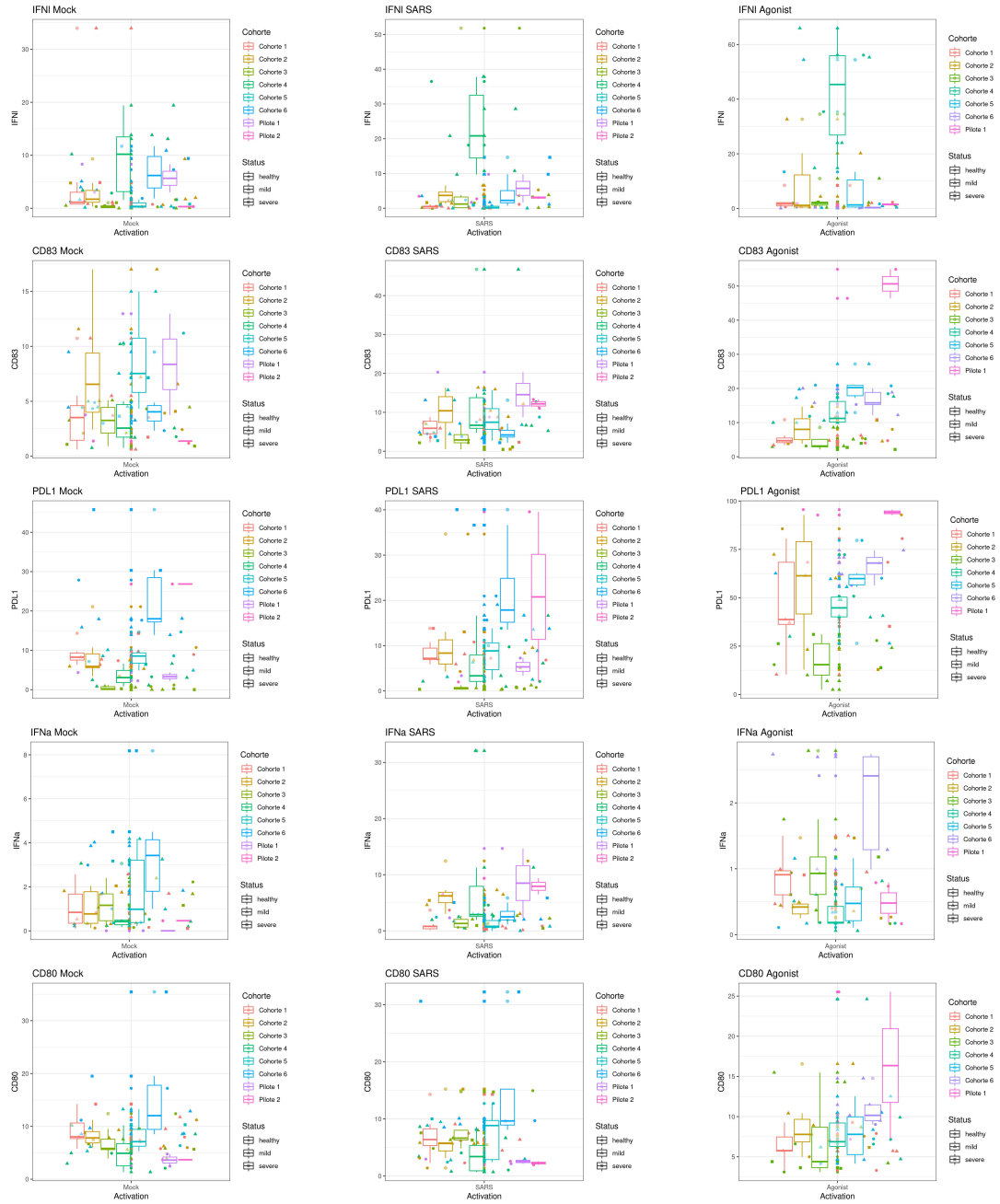


Figure 2: Cohorts and Markers

GradientBoosting

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count    219346.000000  
mean      0.577266  
std       0.715441  
min       0.000000  
25%      0.000000  
50%      0.000000  
75%      1.000000  
max       2.000000  
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```

```
/home/dcluet/.local/share/r-miniconda/envs/r-reticulate/lib/python3.8/site-packages/sklearn/metrics/_classification.py:136: UserWarning: y_pred contains classes not in y_true  
warnings.warn("y_pred contains classes not in y_true")  
/home/dcluet/.local/share/r-miniconda/envs/r-reticulate/lib/python3.8/site-packages/sklearn/metrics/_classification.py:136: UserWarning: y_pred contains classes not in y_true  
warnings.warn("y_pred contains classes not in y_true")  
/home/dcluet/.local/share/r-miniconda/envs/r-reticulate/lib/python3.8/site-packages/sklearn/metrics/_classification.py:136: UserWarning: y_pred contains classes not in y_true  
warnings.warn("y_pred contains classes not in y_true")
```

```
{'fit_time': array([16.49790716, 17.45981765, 13.51742291, 17.6325624 , 17.32238173,  
                  16.75848651, 19.59194899, 19.82147479]), 'score_time': array([0.11953616, 0.09111857, 0.18471885,  
                  0.09295154, 0.02360559, 0.01121163]), 'test_accuracy': array([0.5097744 , 0.63801592, 0.48242422,  
                  0.46278536, 0.8987679 , 0.97243859]), 'test_balanced_accuracy': array([0.34892726, 0.34258867, 0.34018951,  
                  0.34018951, 0.8987679 , 0.97243859]), 'test_neg_mean_absolute_error': array([-0.71004638, -0.3836666,  
                  -0.57659057, -0.1012321 , -0.02756141])}
```

	accuracy	balanced accuracy	mean absolute error
0	0.509774	0.348927	0.710046
1	0.638016	0.342589	0.383666
2	0.482424	0.387522	0.693469
3	0.493294	0.494562	0.506904
4	0.571277	0.344187	0.437998
5	0.462785	0.340190	0.576591
6	0.898768	0.898768	0.101232
7	0.972439	0.972439	0.027561

```
Pipeline(steps=[('preprocessor',  
                 ColumnTransformer(remainder='passthrough', sparse_threshold=0,  
                                   transformers=[('cat_preprocessor',  
                                                OrdinalEncoder(handle_unknown='use_encoded_value',  
                                                                unknown_value=-1),  
                                                ['Activation'])])),  
              ('classifier', GradientBoostingClassifier(random_state=666))])
```

The test accuracy using a Pipeline is 0.562

features	importance
IFN1	0.3555306
CD83	0.2197104
PDL1	0.0804040
IFNa	0.2062035
CD80	0.0266727
Activation	0.1114788

Linear Regression

IFN1	CD83	PDL1	IFNa
Min. :0.000	Min. :0.00000	Min. :0.0000	Min. :0.00000
1st Qu.:0.000	1st Qu.:0.00000	1st Qu.:0.0000	1st Qu.:0.00000
Median :0.000	Median :0.00000	Median :0.0000	Median :0.00000
Mean :0.102	Mean :0.07435	Mean :0.2532	Mean :0.01763
3rd Qu.:0.000	3rd Qu.:0.00000	3rd Qu.:1.0000	3rd Qu.:0.00000
Max. :1.000	Max. :1.00000	Max. :1.0000	Max. :1.00000

CD80	Patient	Cohorte	Activation
Min. :0.00000	Length:219346	Length:219346	Mock :59350
1st Qu.:0.00000	Class :character	Class :character	Agonist:82456
Median :0.00000	Mode :character	Mode :character	SARS :77540
Mean :0.06908			
3rd Qu.:0.00000			
Max. :1.00000			

Severity	Status	perc_pDCs
Min. :0.0000	healthy:122098	Min. : 0.700
1st Qu.:0.0000	mild : 67875	1st Qu.: 4.150
Median :0.0000	severe : 29373	Median : 7.730
Mean :0.5773		Mean : 8.254
3rd Qu.:1.0000		3rd Qu.:10.700
Max. :2.0000		Max. :28.000

IFN1	CD83	PDL1	IFNa
Min. :0.0000	Min. :0.00000	Min. :0.0000	Min. :0.00000
1st Qu.:0.0000	1st Qu.:0.00000	1st Qu.:0.0000	1st Qu.:0.00000
Median :0.0000	Median :0.00000	Median :0.0000	Median :0.00000
Mean :0.1015	Mean :0.07404	Mean :0.2534	Mean :0.01717
3rd Qu.:0.0000	3rd Qu.:0.00000	3rd Qu.:1.0000	3rd Qu.:0.00000
Max. :1.0000	Max. :1.00000	Max. :1.0000	Max. :1.00000

CD80	Patient	Cohorte	Activation
Min. :0.00000	Length:153544	Length:153544	Mock :41641
1st Qu.:0.00000	Class :character	Class :character	Agonist:57682
Median :0.00000	Mode :character	Mode :character	SARS :54221
Mean :0.06986			
3rd Qu.:0.00000			
Max. :1.00000			

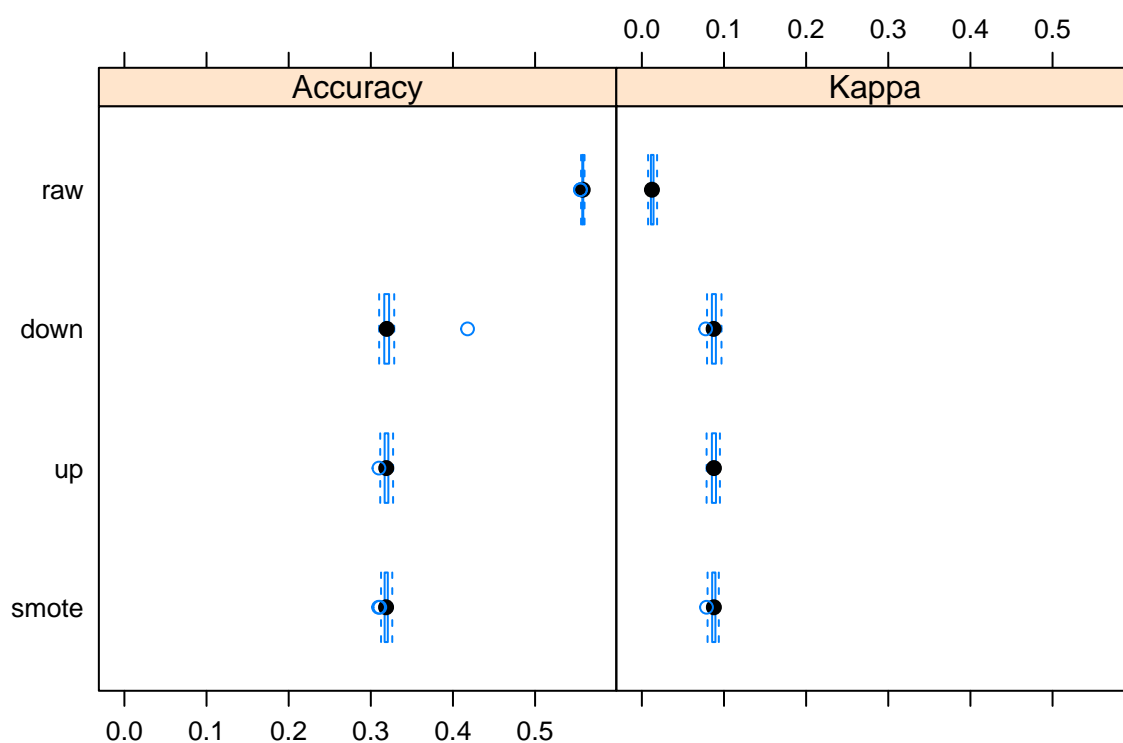
Severity	Status	perc_pDCs
Min. :0.0000	healthy:85469	Min. : 0.700
1st Qu.:0.0000	mild :47513	1st Qu.: 4.150
Median :0.0000	severe :20562	Median : 7.730
Mean :0.5773		Mean : 8.251
3rd Qu.:1.0000		3rd Qu.:10.700
Max. :2.0000		Max. :28.000

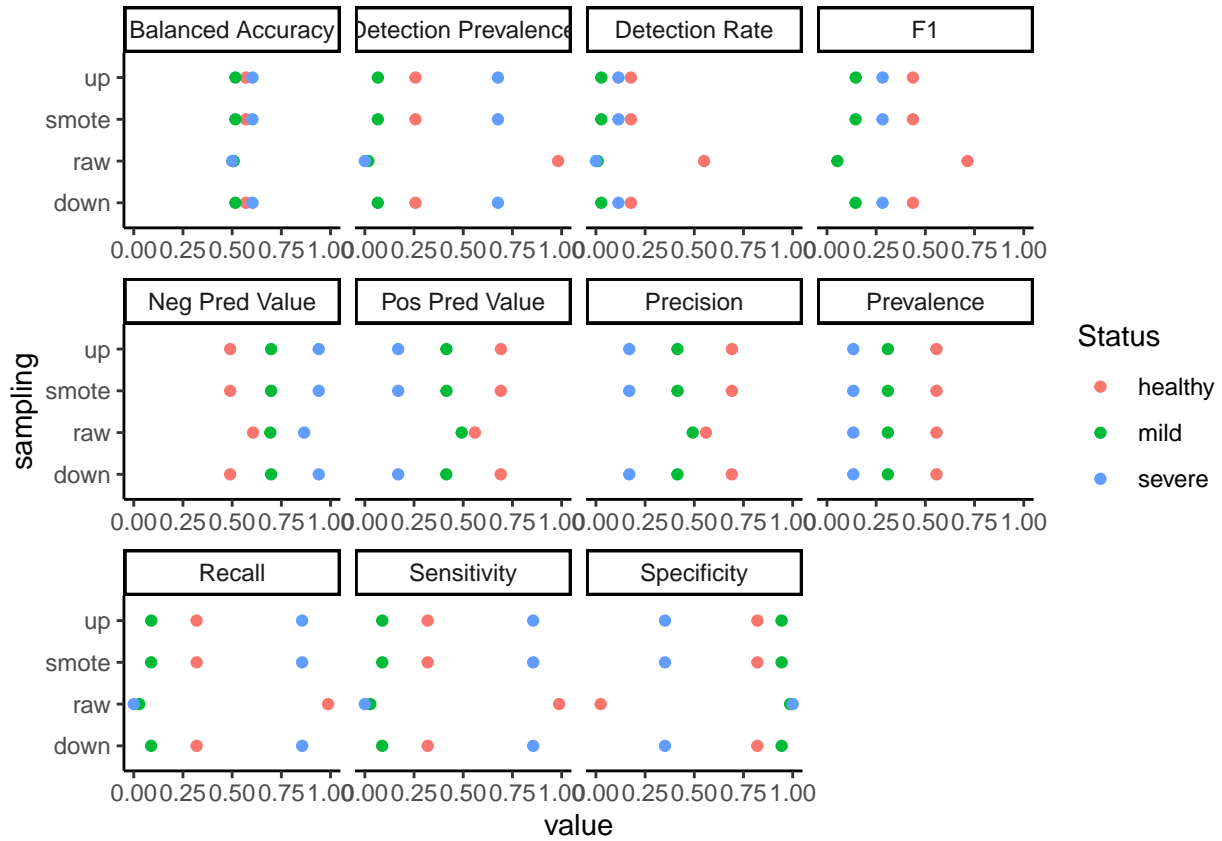
IFN1	CD83	PDL1	IFNa
Min. :0.0000	Min. :0.00000	Min. :0.0000	Min. :0.00000
1st Qu.:0.0000	1st Qu.:0.00000	1st Qu.:0.0000	1st Qu.:0.00000
Median :0.0000	Median :0.00000	Median :0.0000	Median :0.00000
Mean :0.1032	Mean :0.07509	Mean :0.2528	Mean :0.01871
3rd Qu.:0.0000	3rd Qu.:0.00000	3rd Qu.:1.0000	3rd Qu.:0.00000
Max. :1.0000	Max. :1.00000	Max. :1.0000	Max. :1.00000

CD80	Patient	Cohorte	Activation
------	---------	---------	------------

Min. :0.00000	Length:65802	Length:65802	Mock :17709
1st Qu.:0.00000	Class :character	Class :character	Agonist:24774
Median :0.00000	Mode :character	Mode :character	SARS :23319
Mean :0.06725			
3rd Qu.:0.00000			
Max. :1.00000			

Severity	Status	perc_pDCs
Min. :0.0000	healthy:36629	Min. : 0.700
1st Qu.:0.0000	mild :20362	1st Qu.: 4.150
Median :0.0000	severe : 8811	Median : 7.730
Mean :0.5772		Mean : 8.261
3rd Qu.:1.0000		3rd Qu.:10.700
Max. :2.0000		Max. :28.000





Confusion Matrix and Statistics

	Reference		
Prediction	healthy	mild	severe
healthy	27109	9531	2384
mild	5274	4304	539
severe	53086	33678	17639

Overall Statistics

Accuracy : 0.3195
 95% CI : (0.3171, 0.3218)
 No Information Rate : 0.5566
 P-Value [Acc > NIR] : 1

Kappa : 0.0891

Mcnemar's Test P-Value : <2e-16

Statistics by Class:

	Class: healthy	Class: mild	Class: severe
Sensitivity	0.3172	0.09059	0.8578
Specificity	0.8250	0.94518	0.3476
Pos Pred Value	0.6947	0.42542	0.1690
Neg Pred Value	0.4904	0.69874	0.9405

Prevalence	0.5566	0.30944	0.1339
Detection Rate	0.1766	0.02803	0.1149
Detection Prevalence	0.2542	0.06589	0.6800
Balanced Accuracy	0.5711	0.51788	0.6027

Confusion Matrix and Statistics

	Reference		
Prediction	healthy	mild	severe
healthy	11663	4182	1009
mild	2307	1859	263
severe	22659	14321	7539

Overall Statistics

Accuracy : 0.3201
 95% CI : (0.3165, 0.3236)
 No Information Rate : 0.5567
 P-Value [Acc > NIR] : 1

Kappa : 0.0886

McNemar's Test P-Value : <2e-16

Statistics by Class:

	Class: healthy	Class: mild	Class: severe
Sensitivity	0.3184	0.09130	0.8556
Specificity	0.8221	0.94344	0.3511
Pos Pred Value	0.6920	0.41973	0.1693
Neg Pred Value	0.4899	0.69852	0.9402
Prevalence	0.5567	0.30944	0.1339
Detection Rate	0.1772	0.02825	0.1146
Detection Prevalence	0.2561	0.06731	0.6766
Balanced Accuracy	0.5702	0.51737	0.6034

Multinomial regressions Coefficients

	(Intercept)	IFN1	CD83	PDL1	IFNa	CD80
mild	-0.1019738	-0.6249131	0.6529562	-0.6358566	0.07556378	0.6713043
severe	0.1492162	-1.5020310	-0.5225393	-1.1345213	-0.36784565	1.1584182
	ActivationAgonist	ActivationSARS				
mild	0.5724939	0.02573557				
severe	0.4986338	-0.12941995				