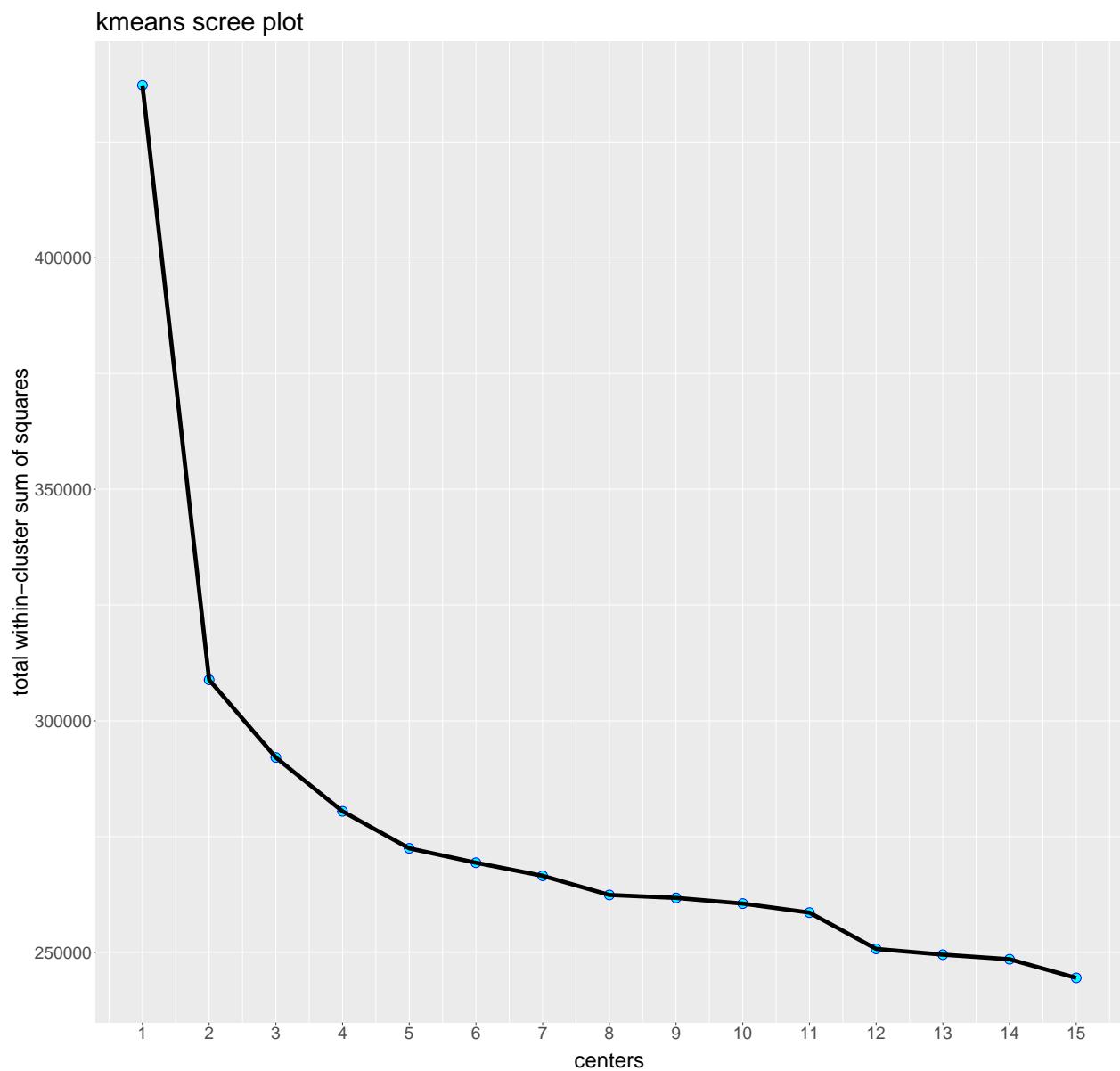
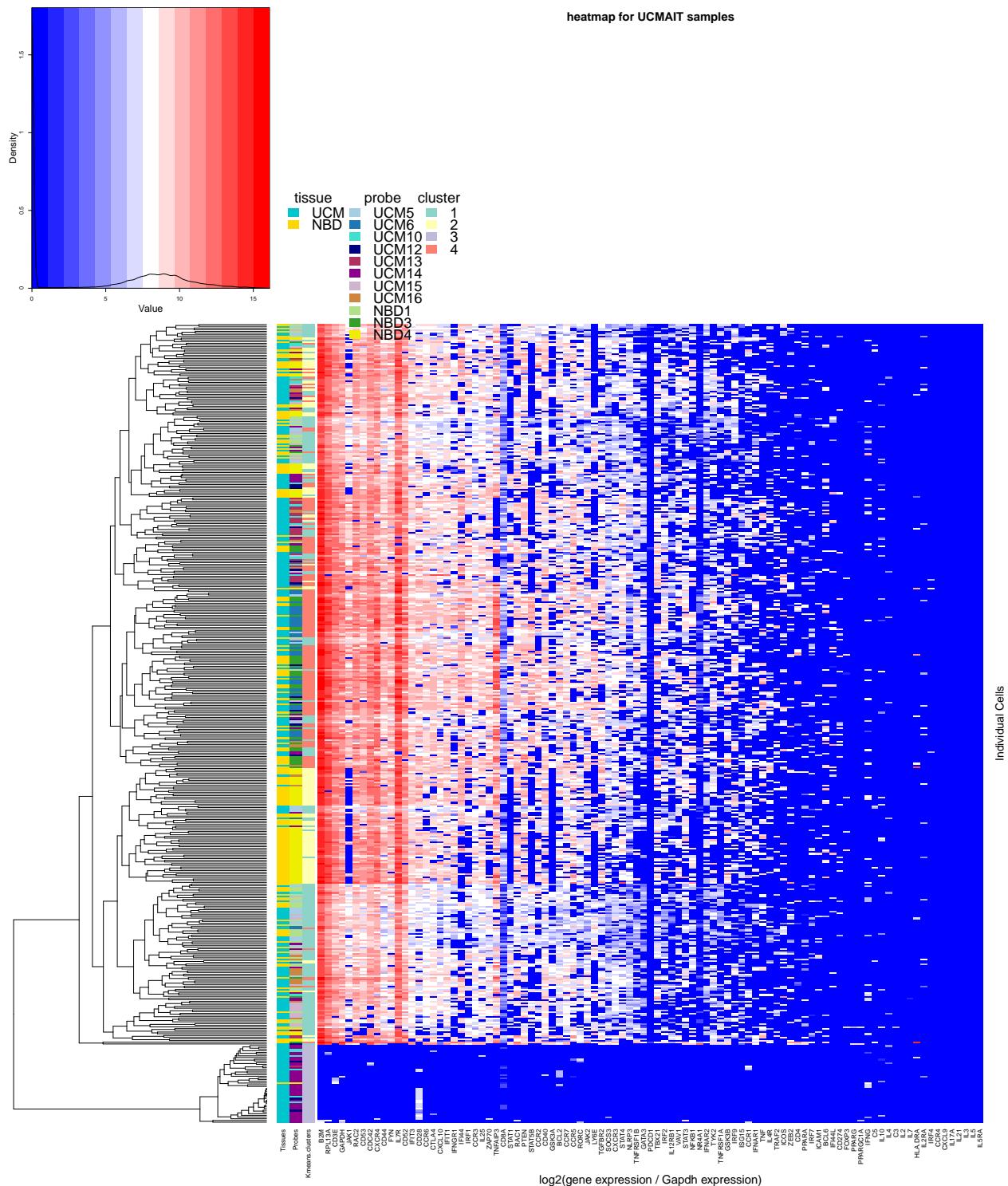


UC-MAIT analysis

No expression detected in 22/492 cells





[1]

[1]

[1] Probe vs. Cluster

	probe_UCM5	probe_UCM6	probe_UCM10	probe_UCM12	probe_UCM13
cluster_1	31	5	4	5	8
cluster_2	0	1	4	2	6
cluster_3	0	0	6	3	1

	4	42	7	9	16
	probe_UCM14	probe_UCM15	probe_UCM16	probe_NBD1	probe_NBD3
cluster_1	22	28	14	46	4
cluster_2	0	1	6	1	1
cluster_3	35	0	0	0	0
cluster_4	8	1	10	1	43
			probe_NBD4		
cluster_1		10			
cluster_2		84			
cluster_3		1			
cluster_4		0			

Pearson's Chi-squared test with simulated p-value (based on 2000 replicates)

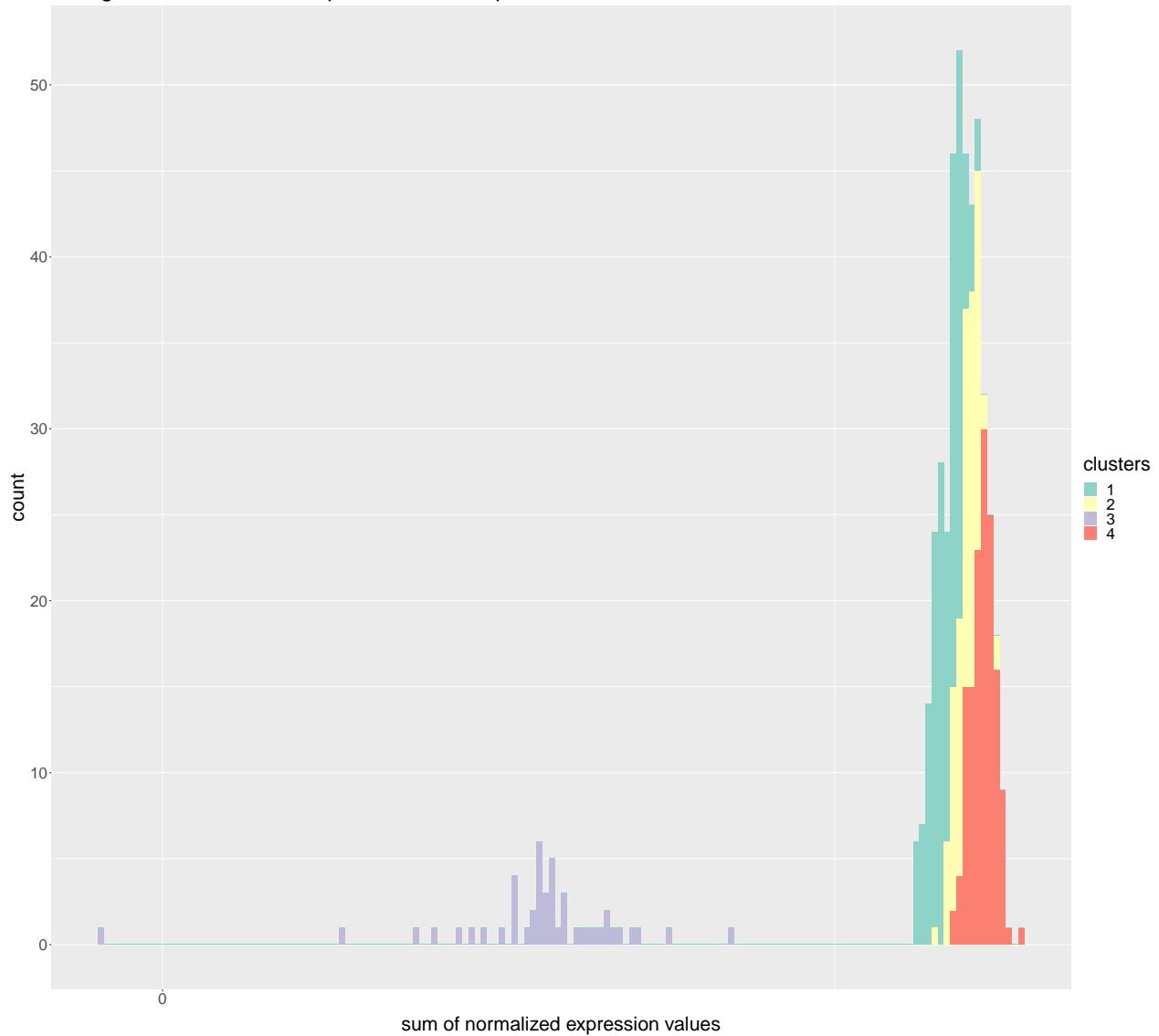
```
data: probeTable
X-squared = 718.94, df = NA, p-value = 0.0004998
```

```
[1]
[1]
[1] Tissue vs. Cluster
      cellSource_UCM cellSource_NBD
cluster_1          117           60
cluster_2          20            86
cluster_3          45            1
cluster_4          97            44
```

Pearson's Chi-squared test with simulated p-value (based on 2000 replicates)

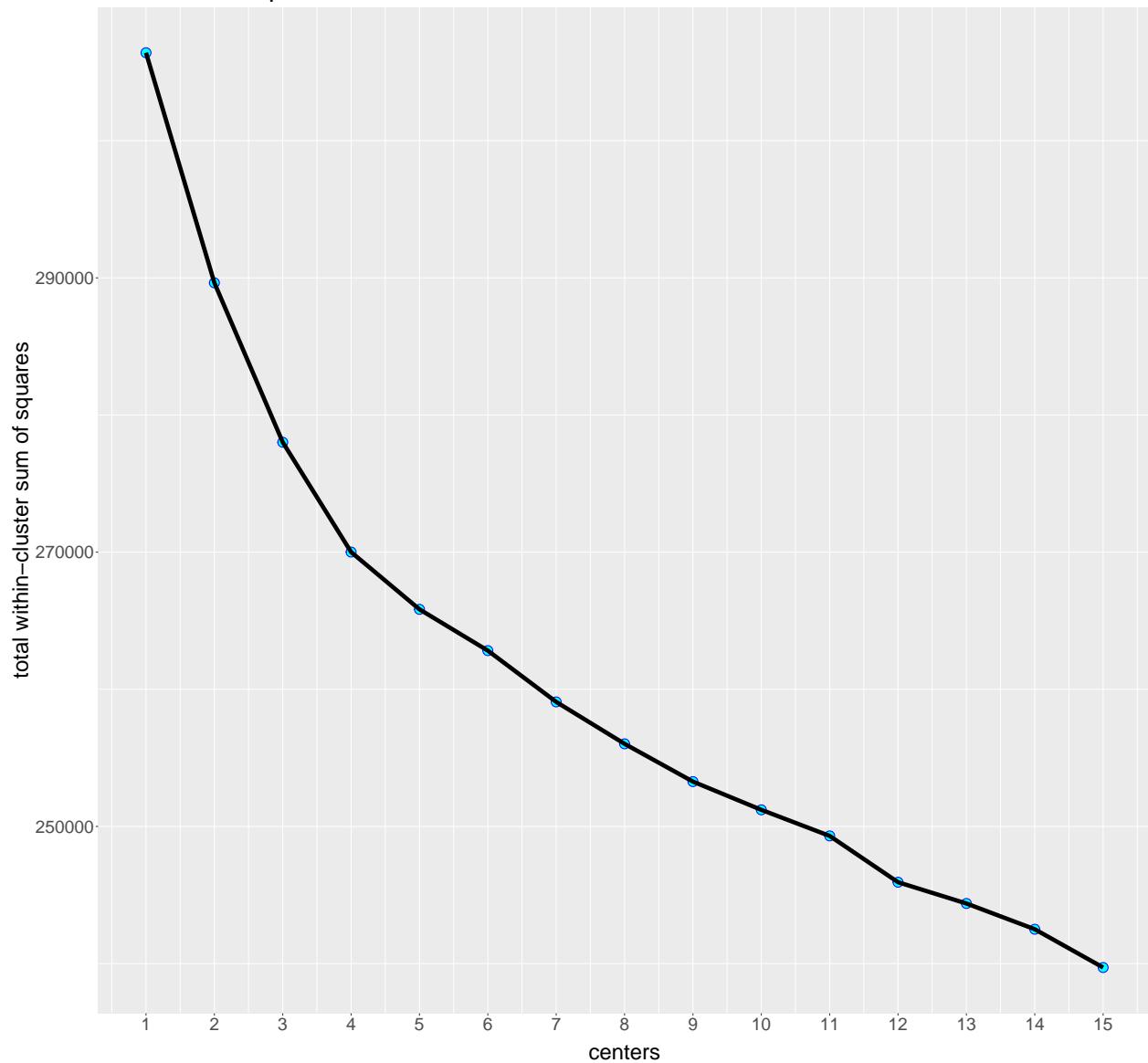
```
data: sourceTable
X-squared = 108.8, df = NA, p-value = 0.0004998
```

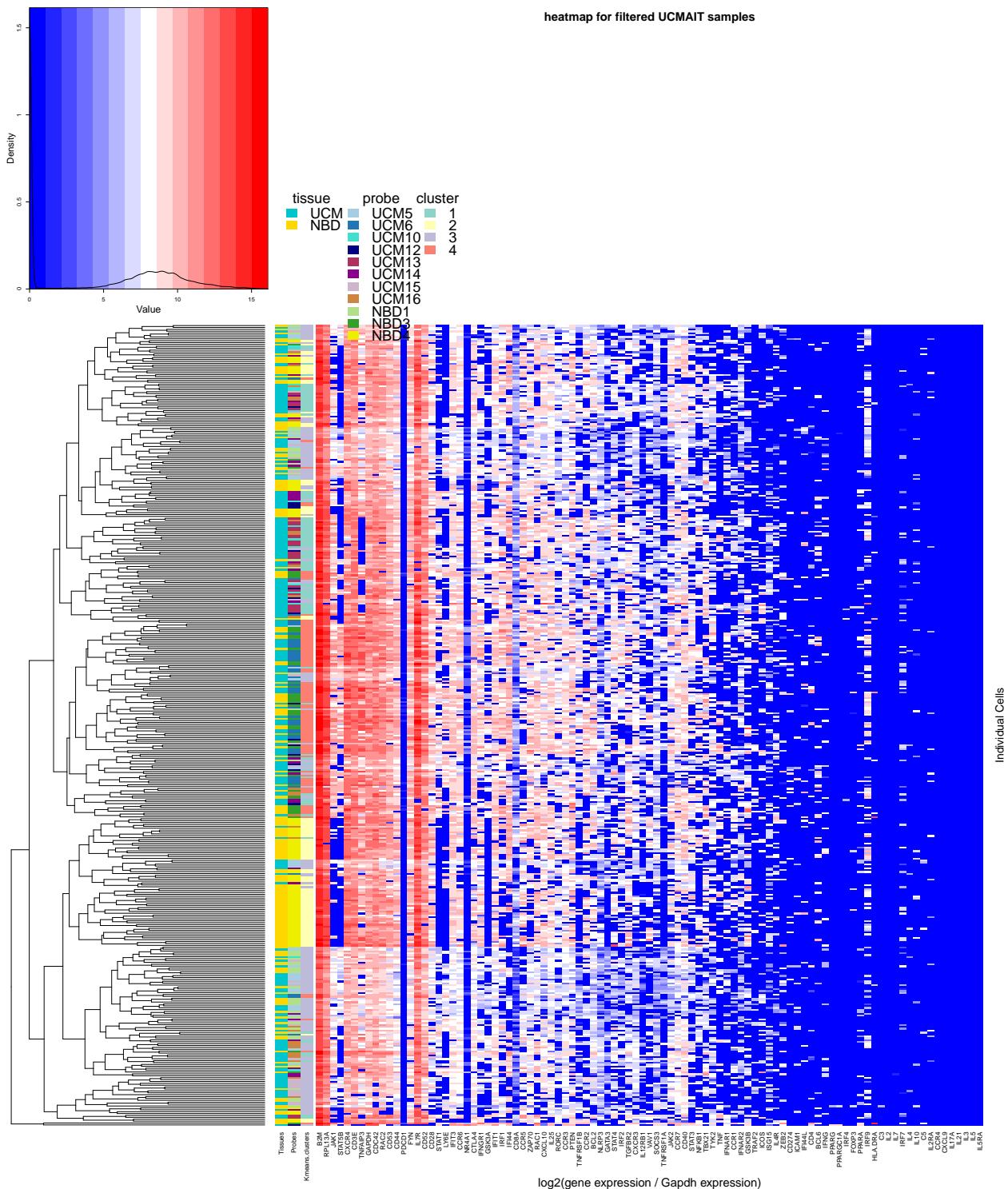
histogram of cumulative expression values per cell



46 / 470 cells were removed due to low gene expression (cluster ID of removed clusters: 3)

kmeans scree plot





[1]

[1]

[1] Probe vs. Cluster

	probe_UCM5	probe_UCM6	probe_UCM10	probe_UCM12	probe_UCM13
cluster_1	1	1	13	9	29
cluster_2	0	1	0	1	0
cluster_3	32	4	2	2	1

cluster_4	2	42	0	4	0
	probe_UCM14	probe_UCM15	probe_UCM16	probe_NBD1	probe_NBD3
cluster_1	13	1	15	2	0
cluster_2	0	1	4	0	1
cluster_3	16	28	9	46	4
cluster_4	1	0	2	0	43
	probe_NBD4				
cluster_1	1				
cluster_2	83				
cluster_3	10				
cluster_4	0				

Pearson's Chi-squared test with simulated p-value (based on 2000 replicates)

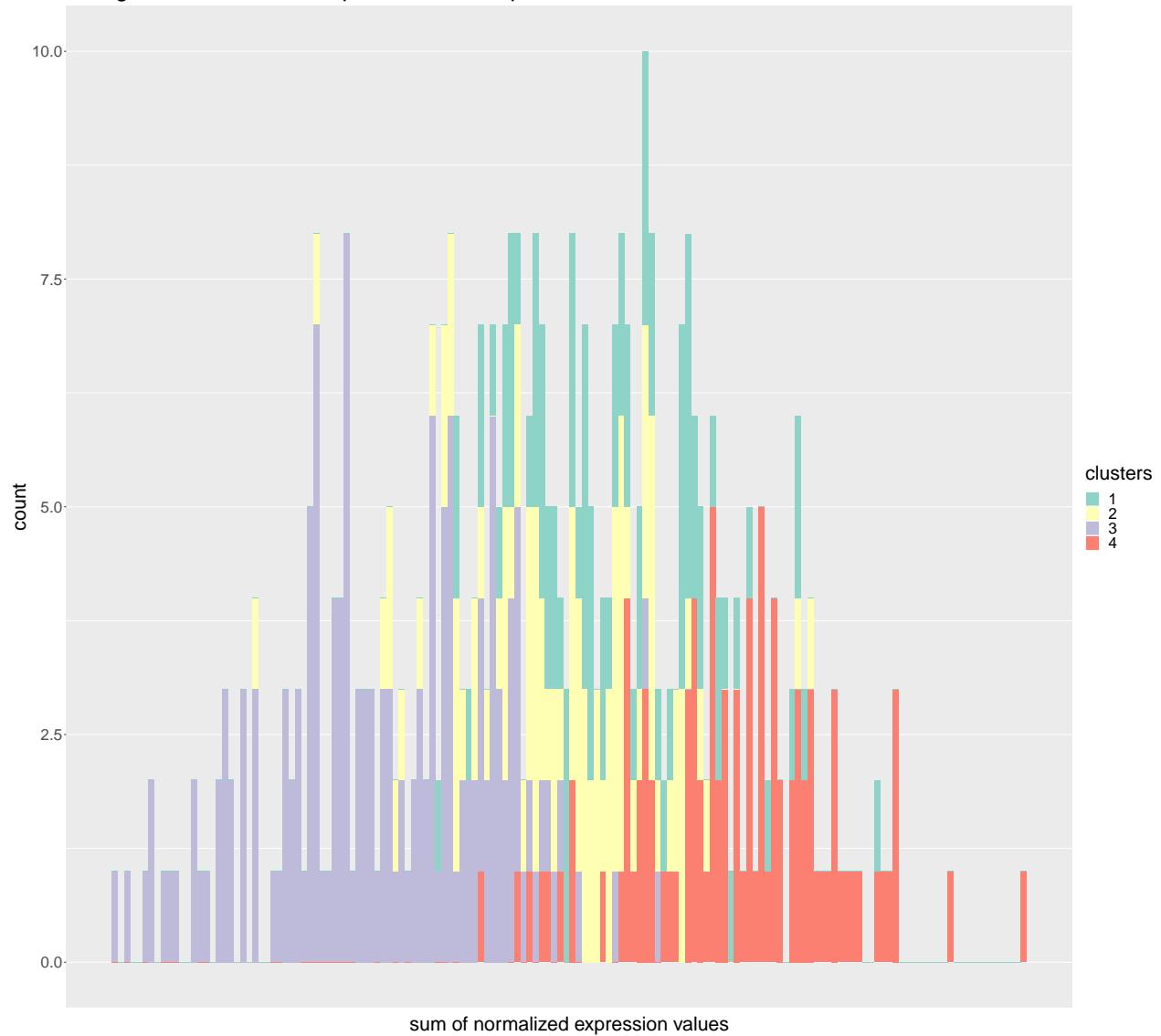
```
data: probeTable
X-squared = 864.66, df = NA, p-value = 0.0004998
```

```
[1]
[1]
[1] Tissue vs. Cluster
      cellSource_UCM cellSource_NBD
cluster_1          82            3
cluster_2           7            84
cluster_3          94            60
cluster_4          51            43
```

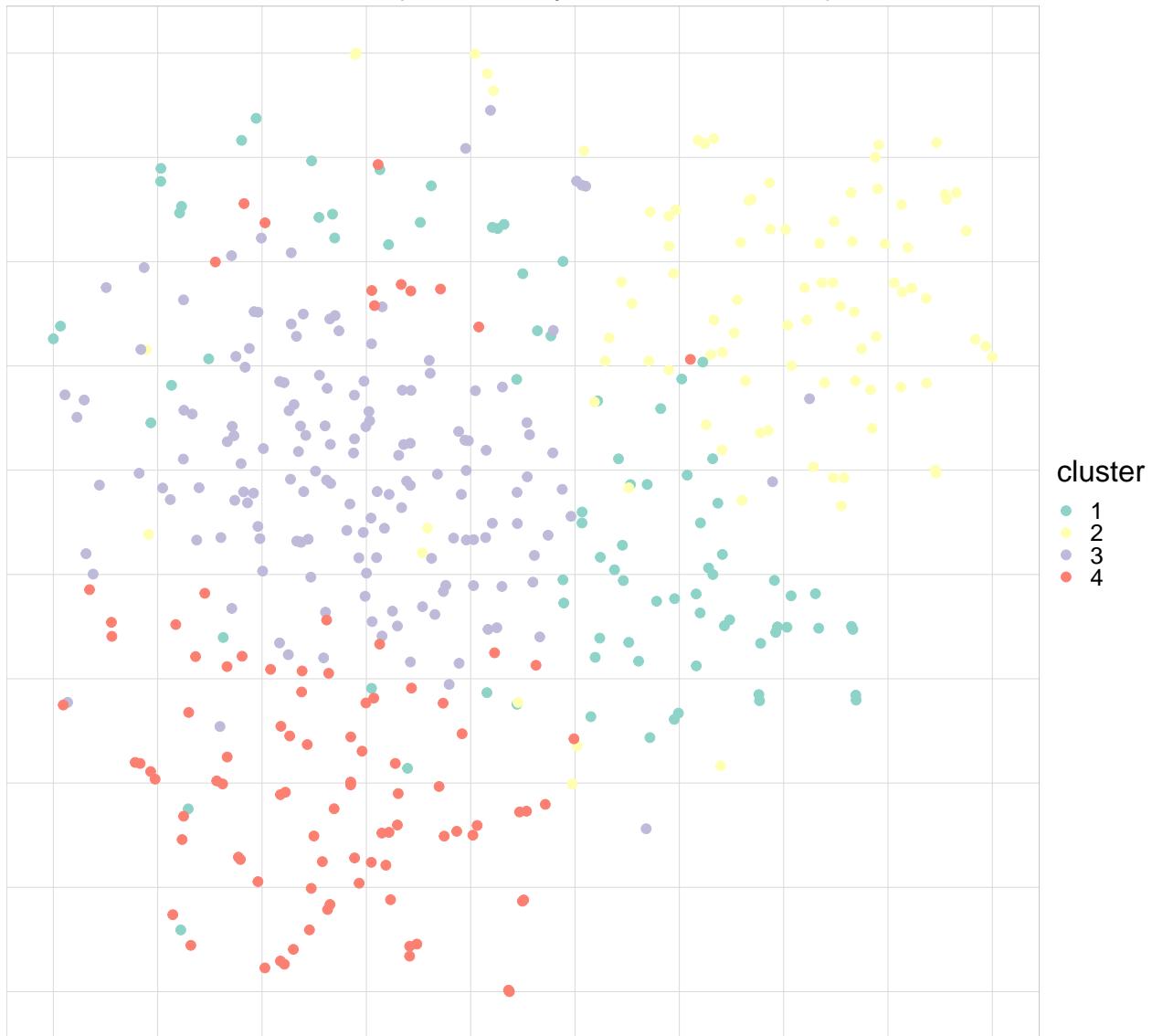
Pearson's Chi-squared test with simulated p-value (based on 2000 replicates)

```
data: sourceTable
X-squared = 143.75, df = NA, p-value = 0.0004998
```

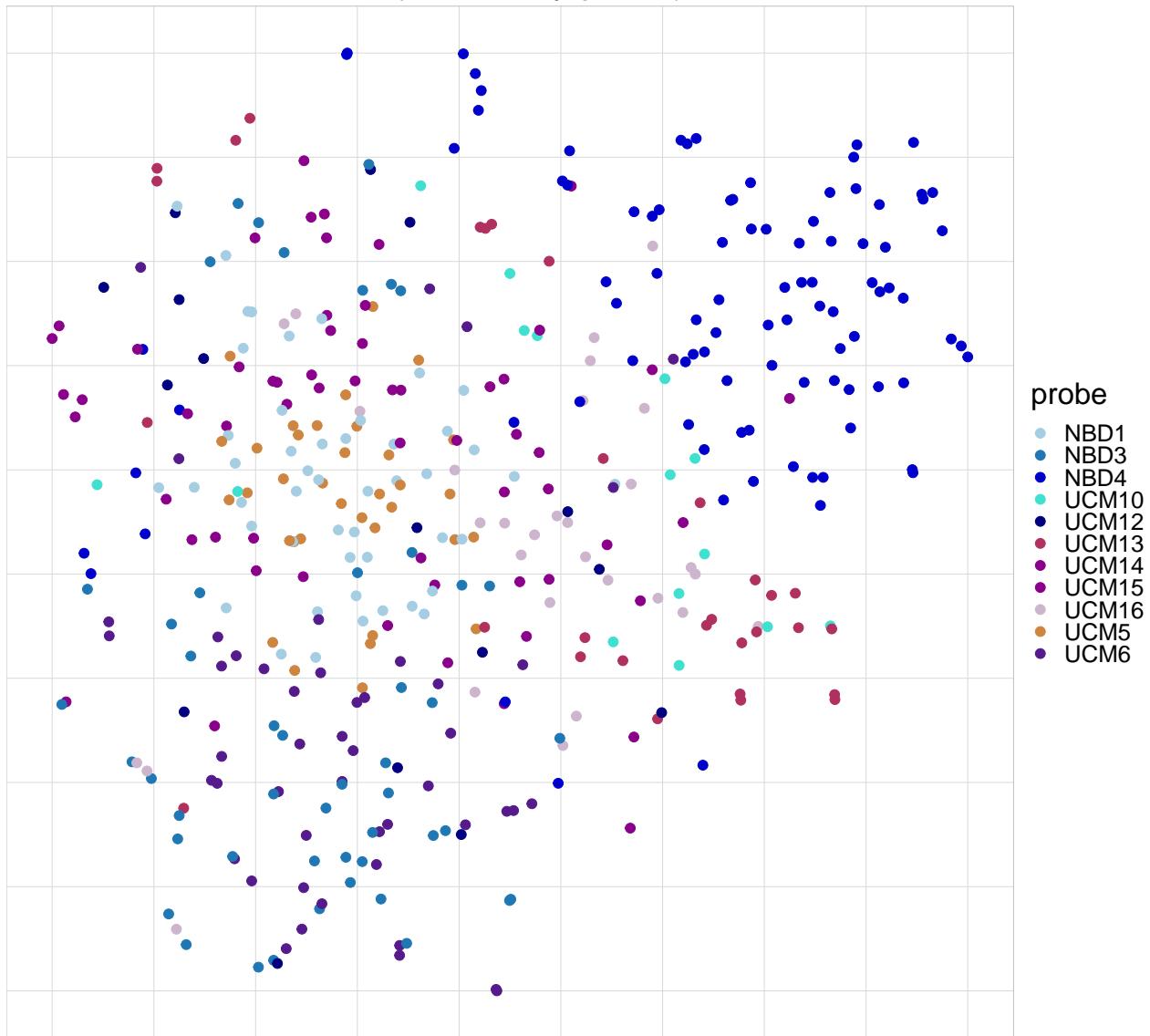
histogram of cumulative expression values per cell



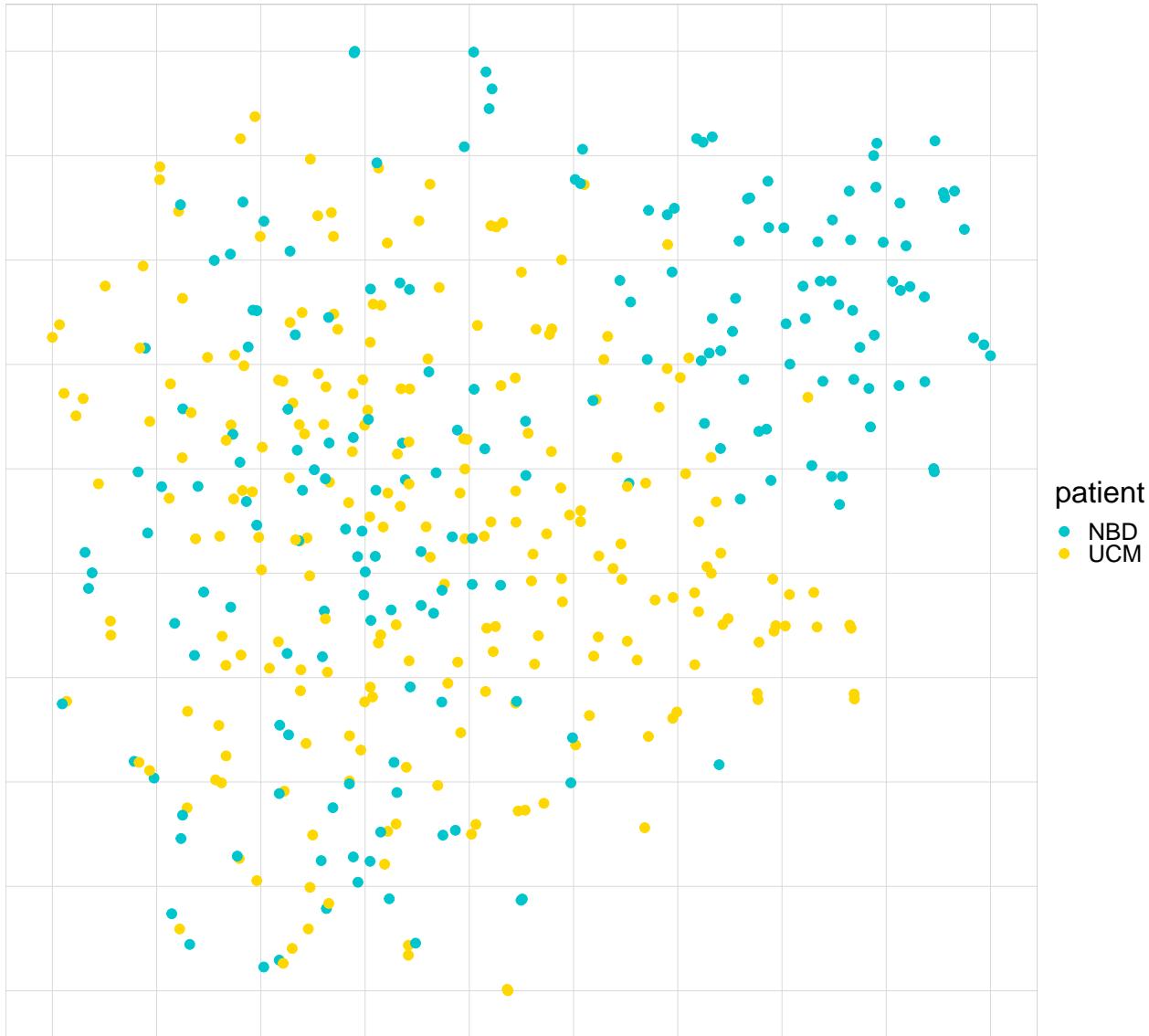
t-SNE between tissues (colored by kmeans.cluster)



t-SNE between tissues (colored by probe)



t-SNE colored by patient



[1] Differentially expressed genes between clusters for human samples:

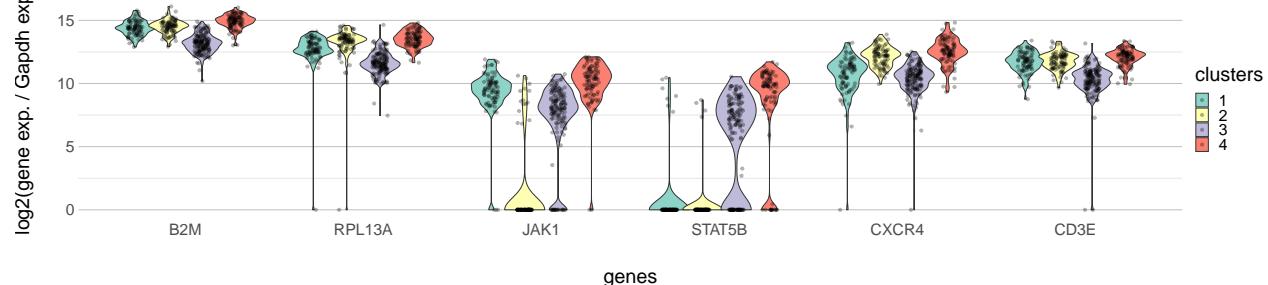
```

[1] B2M: 1.635e-50      RPL13A: 2.726e-49    JAK1: 3.005e-48
[4] STAT5B: 1.908e-45    CXCR4: 6.176e-43    CD3E: 1.072e-41
[7] TNFAIP3: 1.198e-38   GAPDH: 1.795e-37    CDC42: 2.735e-36
[10] RAC2: 5.965e-35     CD53: 1.515e-34    CD44: 2.178e-33
[13] PDCD1: 3.29e-33     FYN: 1.087e-32     IL7R: 1.936e-29
[16] CD52: 3.552e-29     CD28: 2.537e-26    STAT1: 1.255e-25
[19] LY6E: 1.51e-25      IFIT3: 3.911e-25   CCR6: 2.865e-23
[22] NR4A1: 1.753e-22    CTLA4: 5.239e-21   IFNGR1: 6.682e-21
[25] GSK3A: 9.231e-21    IFIT1: 7.023e-20   IRF1: 7.751e-19
[28] IFI44: 3.451e-18    CD8A: 1.289e-17   CCR5: 1.537e-17
[31] ZAP70: 1.776e-16    RAC1: 1.052e-15   CXCL10: 2.294e-15
[34] IL25: 2.794e-15     RORC: 5.629e-15   CCR3: 1.181e-13
[37] PTEN: 2.722e-13     TNFRSF1B: 8.8e-13  CCR2: 1.293e-12
[40] BCL2: 6.751e-12     NLRP3: 2.98e-11   GATA3: 4.353e-11
[43] STAT4: 3.506e-10    IRF2: 7.237e-10  TGFBR2: 1.436e-09

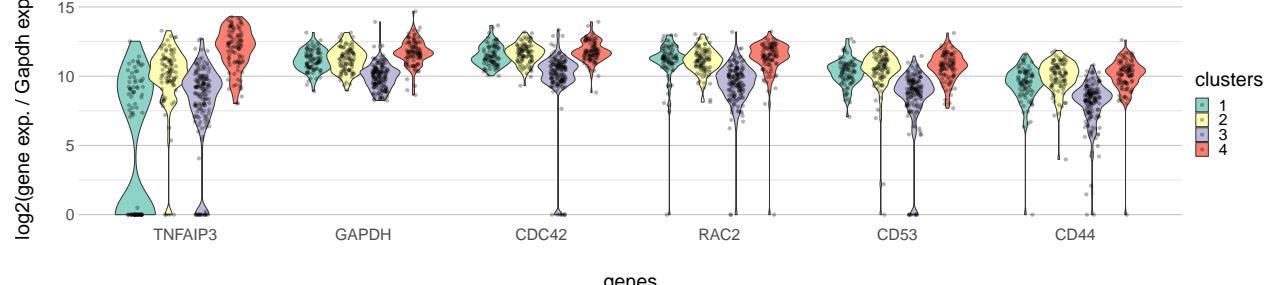
```

[46]	CXCR3:	5.211e-09	IL12RB1:	3.13e-08	VAV1:	3.184e-08
[49]	SOCS3:	1.445e-07	TNFRSF1A:	1.932e-07	JAK2:	3.416e-07
[52]	CCR7:	4.317e-07	CD40:	1.857e-06	STAT3:	2.043e-06
[55]	NFKB1:	2.157e-06	TBX21:	6.067e-06	TYK2:	8.797e-06
[58]	TNF:	0.0006435	IFNAR1:	0.002775	CCR1:	0.002882
[61]	IFNAR2:	0.003073	GSK3B:	0.003517	TRAF2:	0.02145
[64]	ICOS:	0.02364	ISG15:	0.02909		

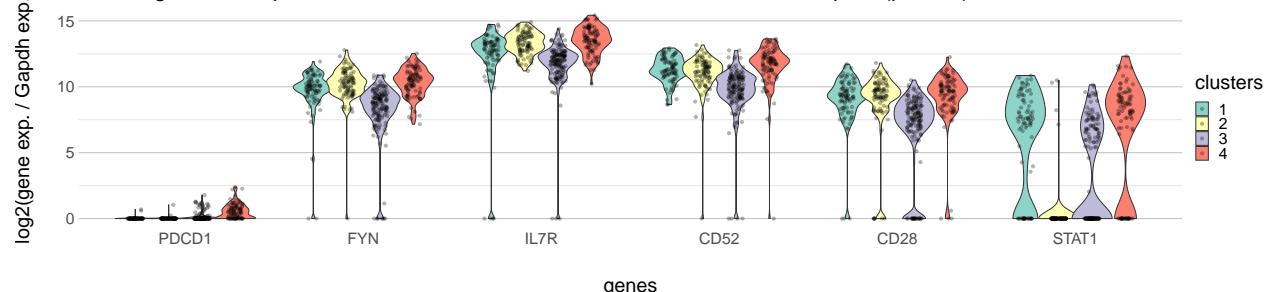
most significant expression differences between clusters for human samples (plot #1)



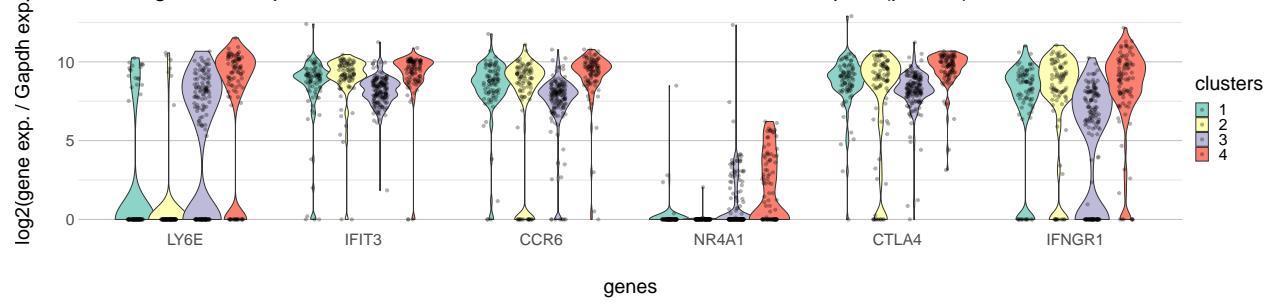
most significant expression differences between clusters for human samples (plot #2)

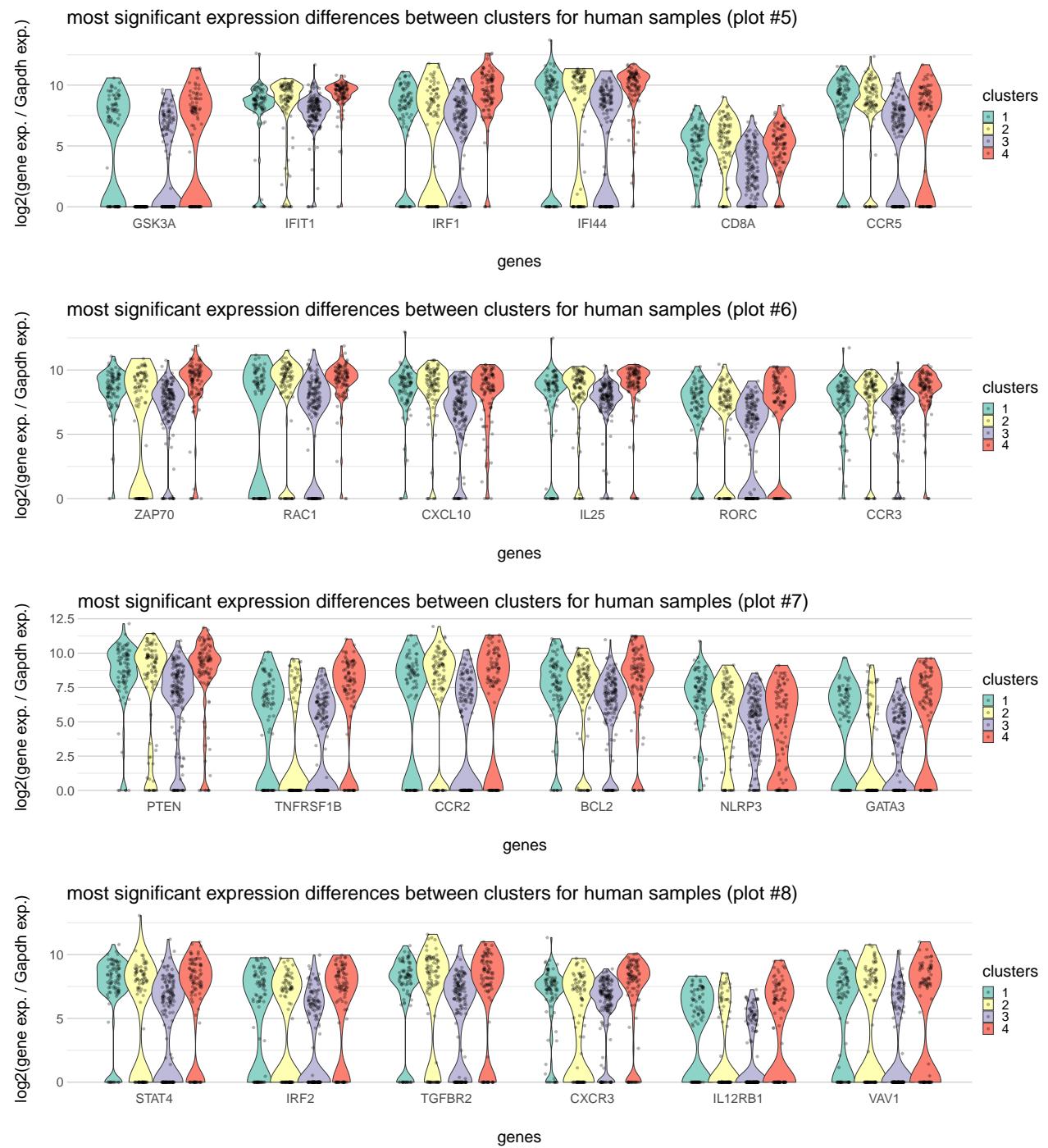


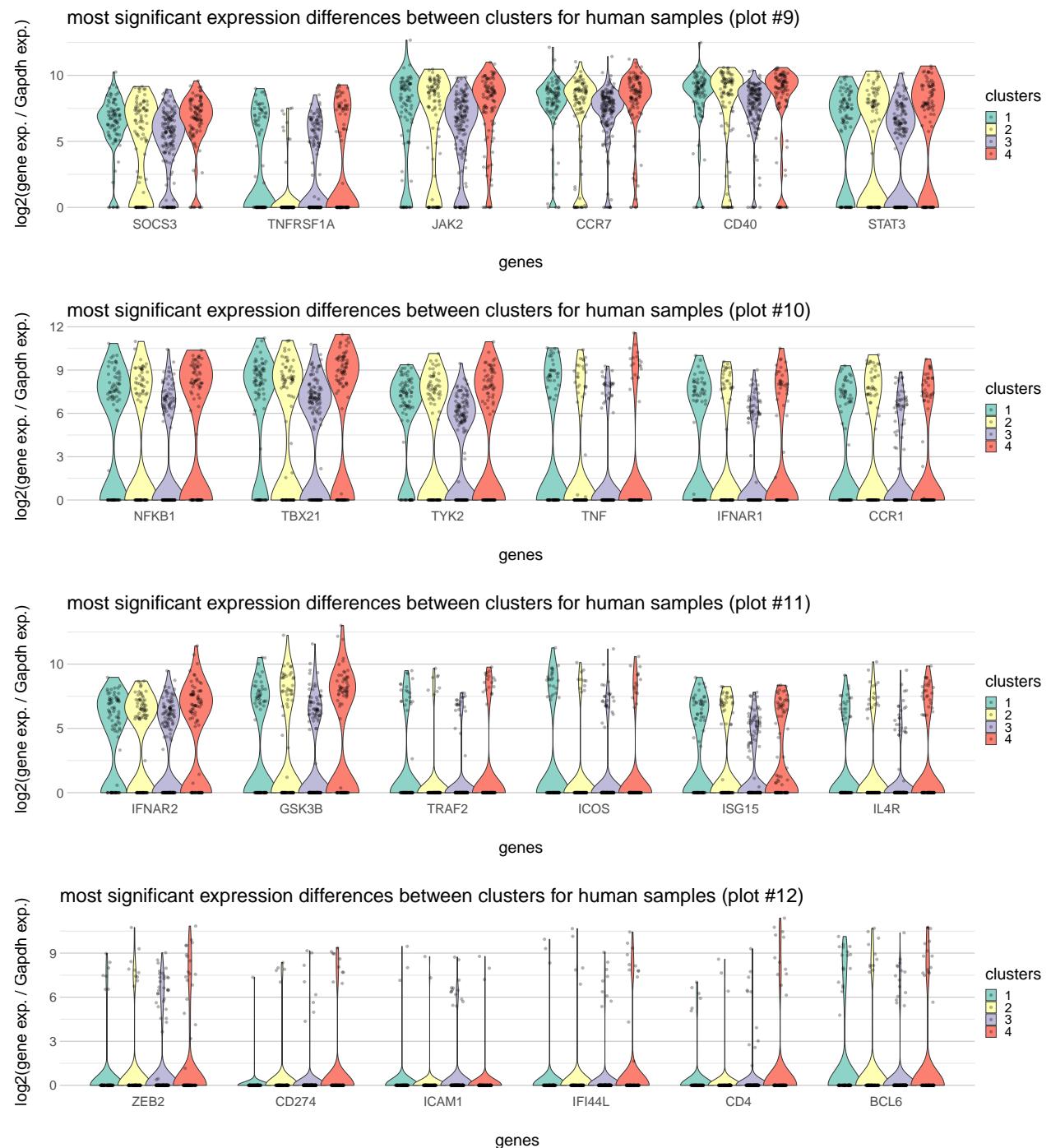
most significant expression differences between clusters for human samples (plot #3)

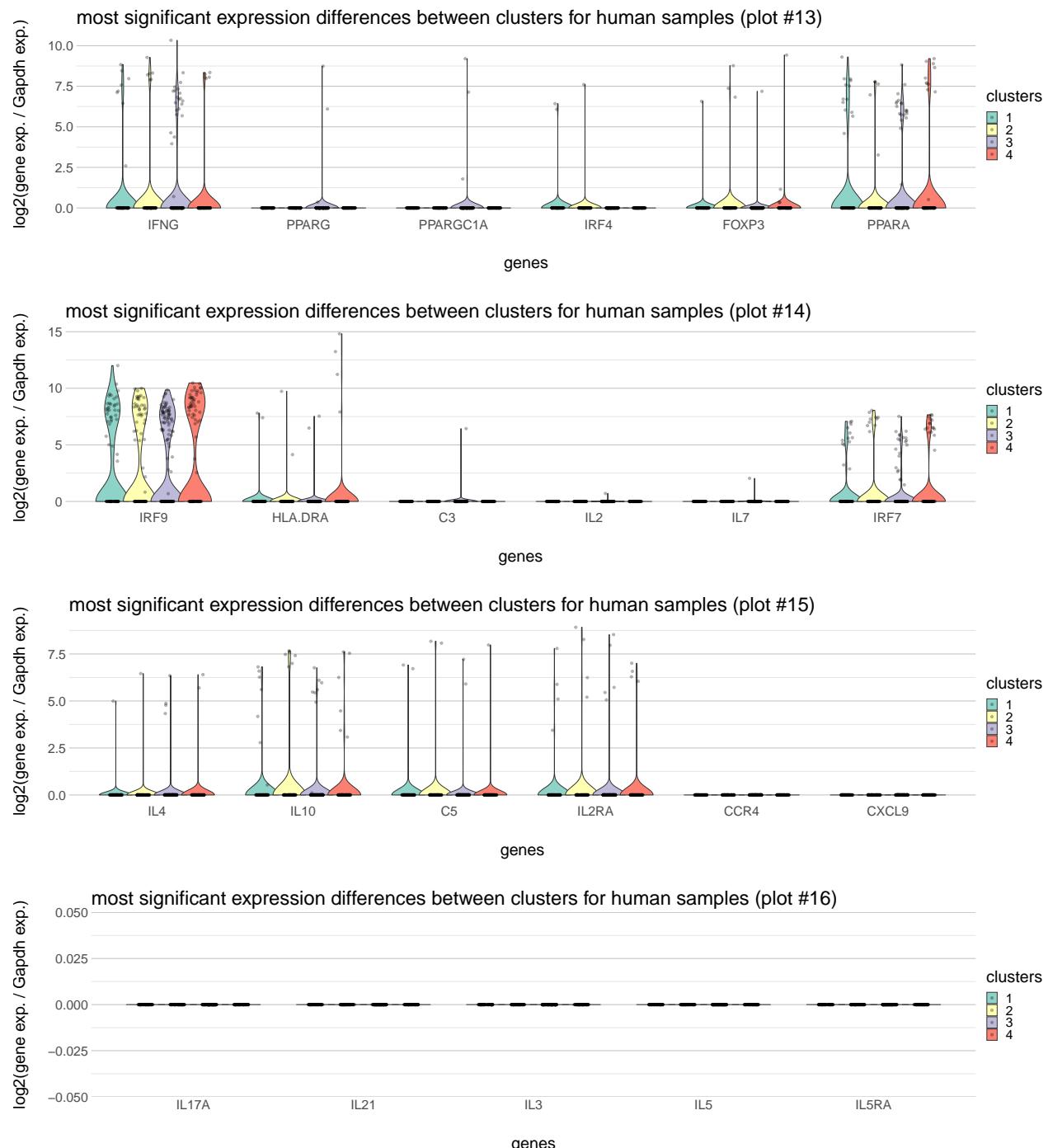


most significant expression differences between clusters for human samples (plot #4)





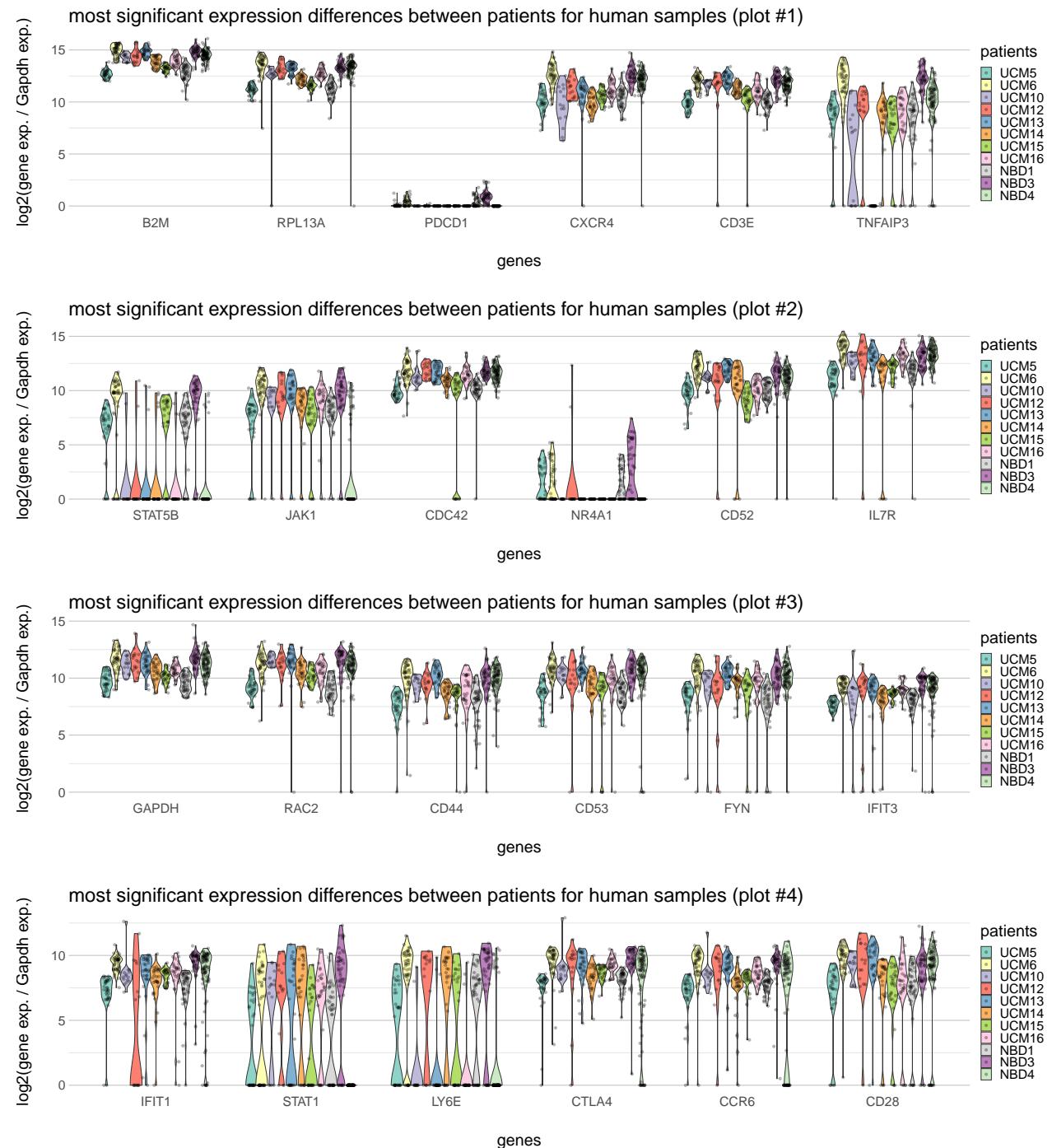


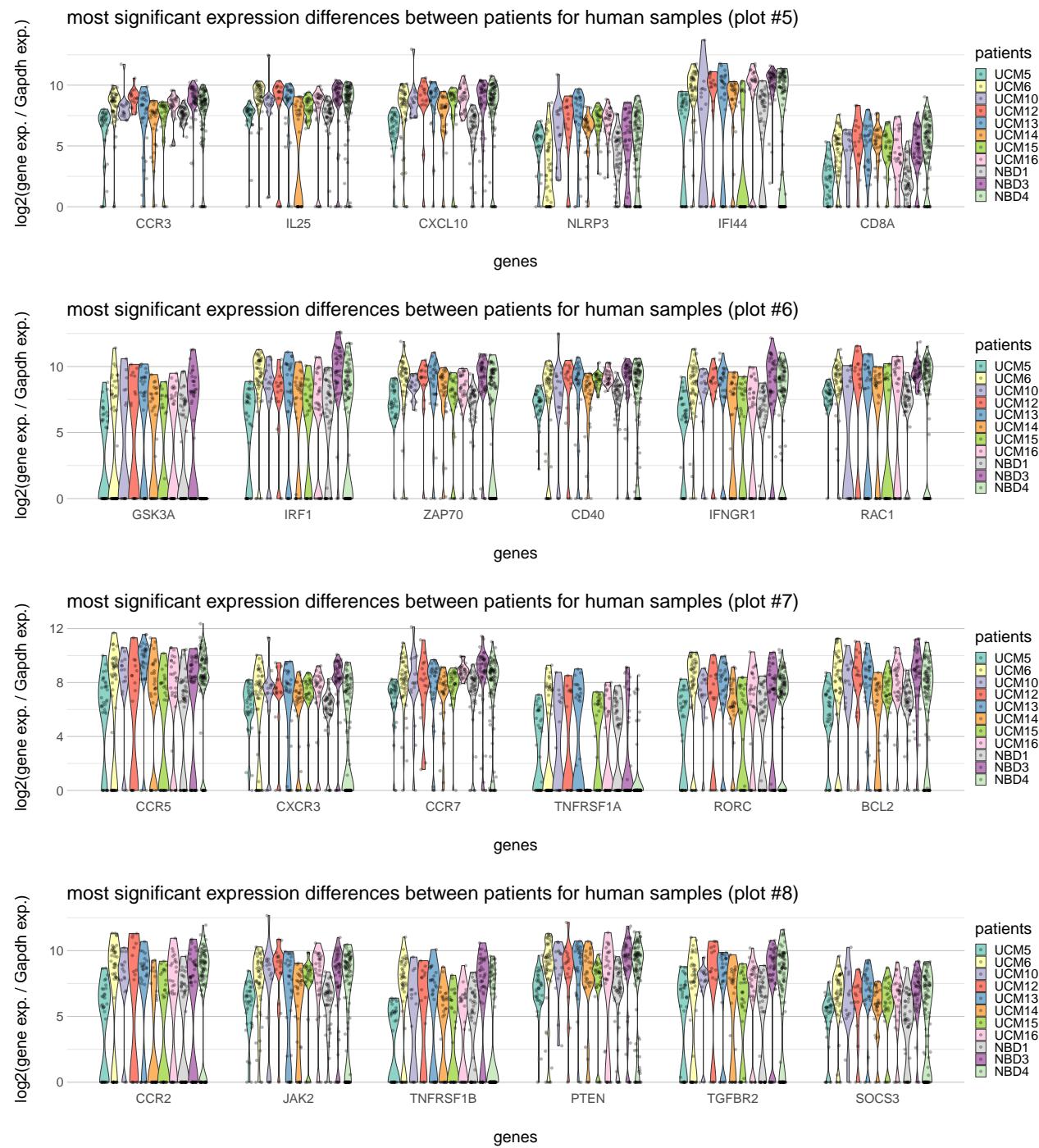


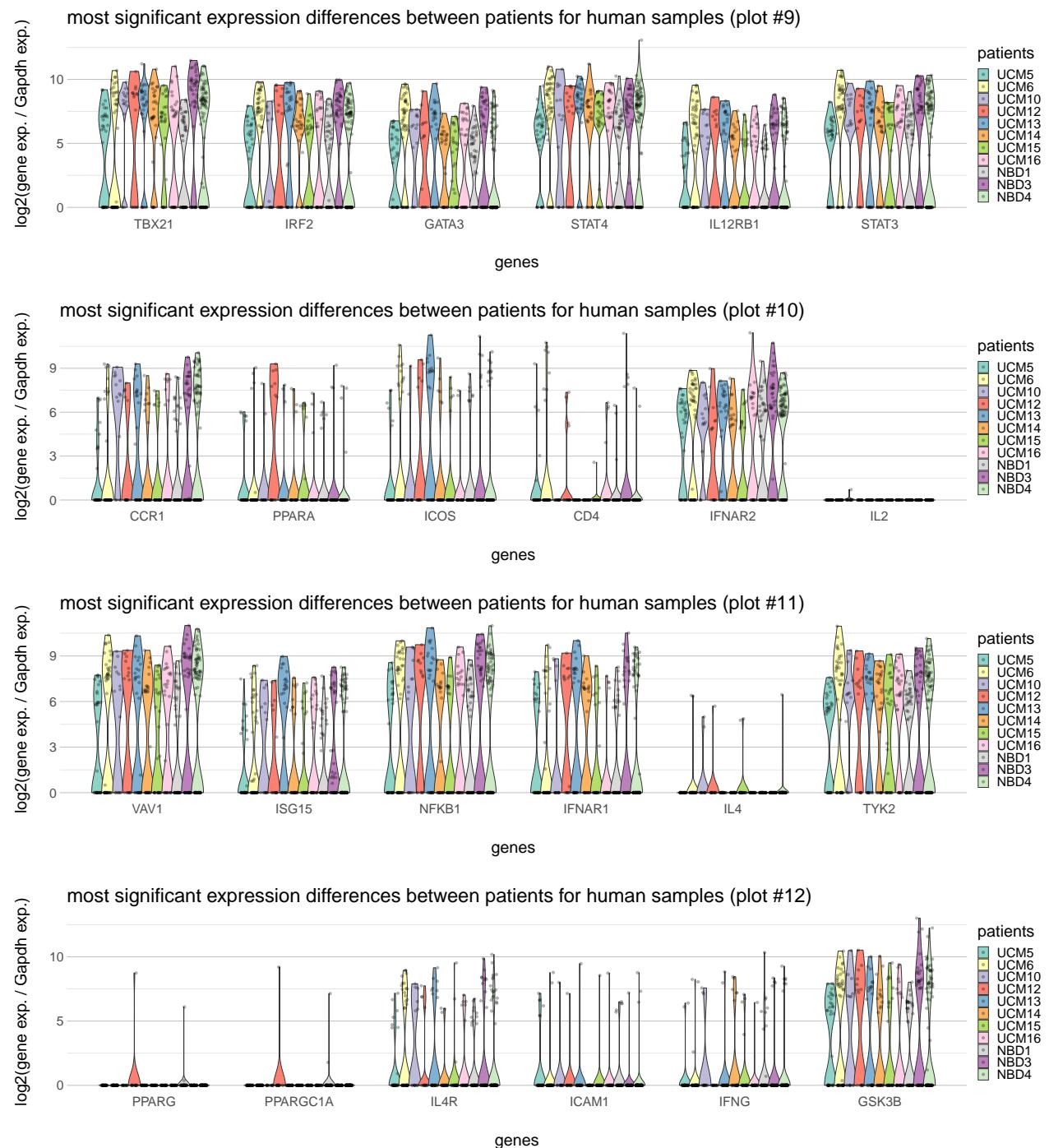
[1] Differentially expressed genes between patients for human samples:

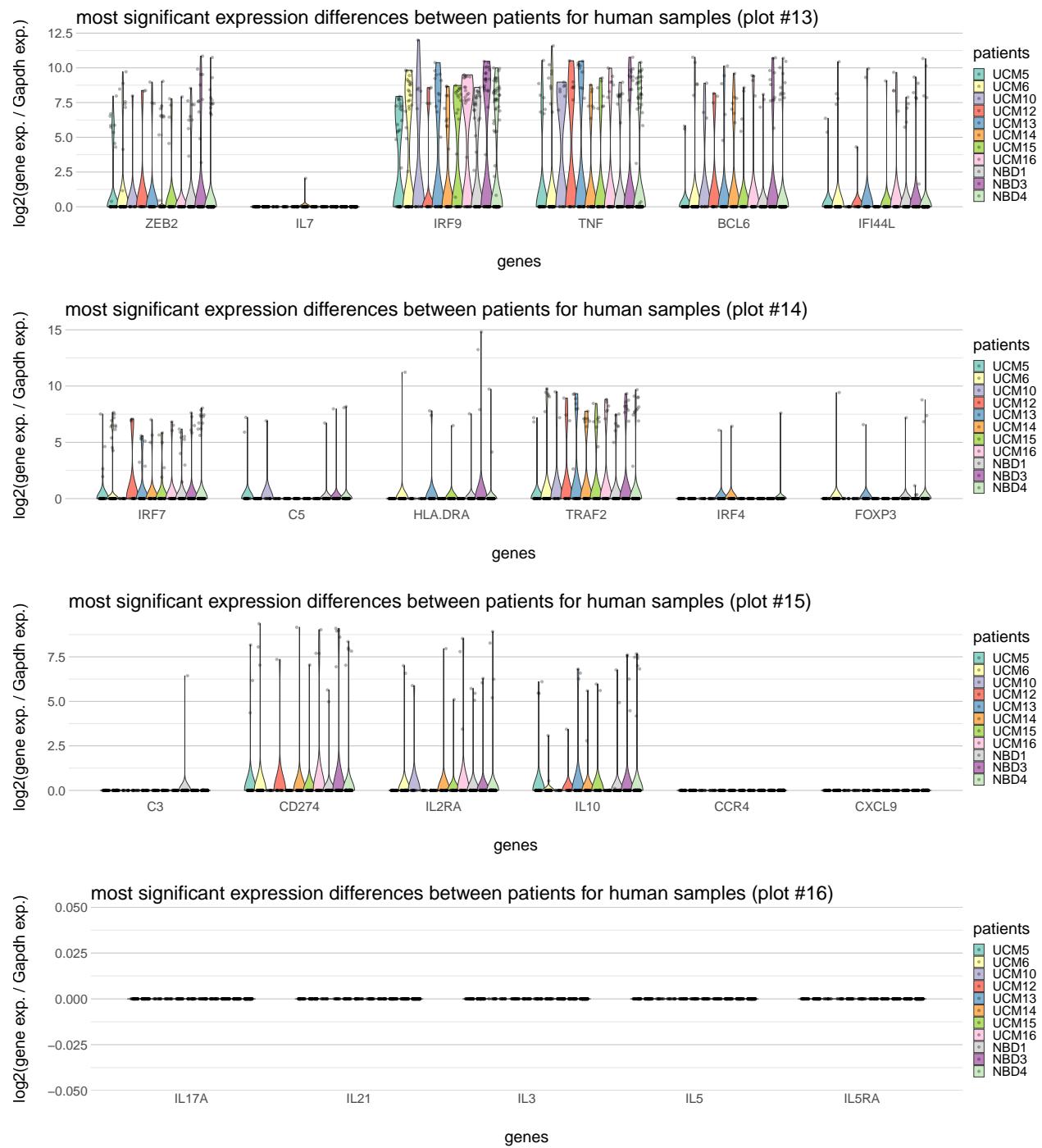
- | | | |
|-----------------------|------------------|--------------------|
| [1] B2M: 7.555e-53 | RPL13A: 9.01e-51 | PDCD1: 1.844e-47 |
| [4] CXCR4: 3.104e-44 | CD3E: 7.706e-44 | TNFAIP3: 2.519e-43 |
| [7] STAT5B: 1.123e-41 | JAK1: 1.346e-38 | CDC42: 2.191e-37 |
| [10] NR4A1: 7.201e-36 | CD52: 1.044e-35 | IL7R: 1.655e-34 |
| [13] GAPDH: 1.214e-33 | RAC2: 1.774e-33 | CD44: 9.123e-32 |
| [16] CD53: 3.842e-29 | FYN: 3.847e-29 | IFIT3: 3.847e-29 |
| [19] IFIT1: 2.052e-27 | STAT1: 1.908e-25 | LY6E: 7.423e-25 |
| [22] CTLA4: 8.072e-24 | CCR6: 8.779e-24 | CD28: 3.495e-22 |
| [25] CCR3: 3.79e-20 | IL25: 8.51e-19 | CXCL10: 1.718e-18 |

[28]	NLRP3:	6.99e-18	IFI44:	1.206e-17	CD8A:	1.917e-16
[31]	GSK3A:	6.448e-16	IRF1:	4.712e-15	ZAP70:	1.296e-13
[34]	CD40:	1.05e-12	IFNGR1:	2.313e-12	RAC1:	1.311e-11
[37]	CCR5:	1.83e-11	CXCR3:	2.514e-11	CCR7:	9.958e-11
[40]	TNFRSF1A:	1.259e-10	RORC:	3.909e-10	BCL2:	1.008e-09
[43]	CCR2:	1.89e-09	JAK2:	1.781e-08	TNFRSF1B:	2.111e-08
[46]	PTEN:	2.127e-08	TGFBR2:	1.121e-07	SOCS3:	1.222e-07
[49]	TBX21:	5.897e-07	IRF2:	1.997e-06	GATA3:	5.502e-06
[52]	STAT4:	5.98e-06	IL12RB1:	1.375e-05	STAT3:	1.801e-05
[55]	CCR1:	4.096e-05	PPARA:	0.001976	ICOS:	0.002
[58]	CD4:	0.002624	IFNAR2:	0.003187	IL2:	0.003466
[61]	VAV1:	0.01154	ISG15:	0.01154	NFKB1:	0.01227
[64]	IFNAR1:	0.01661	IL4:	0.02365		









```
[1] Differentially expressed genes between phenotypes for human samples:
[1] JAK1: 2.721e-11    CXCR4: 3.696e-10    TNFAIP3: 5.052e-08
[4] PDCD1: 2.827e-06   STAT1: 1.332e-05   GSK3A: 4.717e-05
[7] TNFRSF1A: 0.003104 NLRP3: 0.006343   CCR3: 0.01513
[10] IFIT1: 0.01527    CD44: 0.01592     IFIT3: 0.02014
[13] RPL13A: 0.02177   RAC1: 0.02177     CCR1: 0.02177
[16] PPARA: 0.0316     GATA3: 0.03262    IL12RB1: 0.03346
```

