

## Supplementary Table S1

No.	Individuals	JIA Subtype	Gender	Medication History	CyToF	Nanostring
1	Relapse 1011 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX	✓	
2	Relapse 1044 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX	✓	
3	Relapse 2020 (T <sub>o</sub> )	Poly RF -	F	adalimumab, no MTX	✓	
4	Relapse 2042 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX	✓	
5	Relapse 4090 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX	✓	
6	Relapse 5031 (T <sub>o</sub> )	Poly RF -	F	adalimumab, yes MTX	✓	
7	Relapse 6129 (T <sub>o</sub> )	Poly RF -	F	adalimumab, no MTX	✓	
8	Relapse 7063 (T <sub>o</sub> )	Poly RF -	F	etanercept, yes MTX	✓	
9	Relapse 8120 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX	✓	
10	Relapse 5137 (T <sub>o</sub> )	Poly RF -	M	infliximab, yes MTX		✓
11	Relapse 10107 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX		✓
12	Relapse 1006 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX		✓
1	Relapse 1001 (T <sub>end</sub> )	Poly RF -	F	etanercept, no MTX	✓	
2	Relapse 1003 (T <sub>end</sub> )	Poly RF -	F	etanercept, yes MTX	✓	
3	Relapse 1006 (T <sub>end</sub> )	Poly RF -	F	etanercept, no MTX	✓	
4	Relapse 1011 (T <sub>end</sub> )	Poly RF -	F	etanercept, no MTX	✓	
5	Relapse 1044 (T <sub>end</sub> )	Poly RF -	F	etanercept, no MTX	✓	
6	Relapse 3066 (T <sub>end</sub> )	Poly RF -	F	etanercept, no MTX	✓	
7	Relapse 6049 (T <sub>end</sub> )	Poly RF -	F	etanercept, no MTX	✓	✓
8	Relapse 7063 (T <sub>end</sub> )	Poly RF -	F	etanercept, yes MTX	✓	
9	Relapse 10107 (T <sub>end</sub> )	Poly RF -	F	etanercept, no MTX	✓	
10	Relapse 3062 (T <sub>end</sub> )	Poly RF -	M	infliximab, yes MTX		✓
11	Relapse 6048 (T <sub>end</sub> )	Poly RF -	F	etanercept, yes MTX		✓

No.	Individuals	JIA Subtype	Gender	Medication History	CyToF	Nanostring
1	Remission 1018 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX	✓	
2	Remission 1034 (T <sub>o</sub> )	Poly RF -	M	etanercept, no MTX	✓	
3	Remission 1124 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX	✓	
4	Remission 2022 (T <sub>o</sub> )	Poly RF +	F	etanercept, yes MTX	✓	✓
5	Remission 2114 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX	✓	
6	Remission 4014 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX	✓	
7	Remission 5121 (T <sub>o</sub> )	Poly RF -	M	etanercept, yes MTX	✓	
8	Remission 6128 (T <sub>o</sub> )	Poly RF -	M	etanercept, yes MTX	✓	
9	Remission 7056 (T <sub>o</sub> )	Poly RF -	F	etanercept, no MTX	✓	
10	Remission 8130 (T <sub>o</sub> )	Poly RF -	F	adalimumab, yes MTX	✓	
11	Remission 15122 (T <sub>o</sub> )	Poly RF +	F	etanercept, no MTX	✓	
12	Remission 5127 (T <sub>o</sub> )	Poly RF -	F	etanercept, yes MTX		✓
13	Remission 4073 (T <sub>o</sub> )	Poly RF +	F	adalimumab, no MTX		✓
1	Remission 2022 (T <sub>end</sub> )	Poly RF +	F	etanercept, yes MTX	✓	
2	Remission 5026 (T <sub>end</sub> )	Poly RF -	M	etanercept, yes MTX	✓	
3	Remission 8054 (T <sub>end</sub> )	Poly RF -	F	etanercept, no MTX	✓	
4	Remission 8131 (T <sub>end</sub> )	Poly RF -	M	etanercept, no MTX	✓	
5	Remission 9086 (T <sub>end</sub> )	Poly RF -	F	etanercept, no MTX	✓	✓
6	Remission 9098 (T <sub>end</sub> )	Poly RF -	F	etanercept, no MTX	✓	
7	Remission 16111 (T <sub>end</sub> )	Poly RF +	F	etanercept, yes MTX	✓	
8	Remission 10081 (T <sub>end</sub> )	Poly RF +	M	etanercept, yes MTX		✓
9	Remission 3103 (T <sub>end</sub> )	Poly RF +	F	adalimumab, no MTX		✓

		Relapse		Remission		Healthy
		T <sub>o</sub> (n=12)	T <sub>end</sub> (n=11)	T <sub>o</sub> (n=13)	T <sub>end</sub> (n=9)	n= 69
Anti-TNFα Biologics	etanercept (%)	8 (66.7%)	10 (90.9%)	11 (84.6%)	9 (100%)	N.A.
	adalimumab (%)	3 (25%)	0 (0%)	2 (15.4%)	0 (0%)	N.A.
	infliximab (%)	1 (8.33%)	1 (9.1%)	0 (0%)	0 (0%)	N.A.
Methotrexate (concurrent) (%)		3 (25%)	4 (36.4%)	5 (38.5%)	4 (44.4%)	N.A.
Rheumatoid Factor*		0 (0%)	0	3 (23.1%)	4 (44.4%)	N.A.
Average age (yrs) ± Std Dev		14.2 ± 4.2	12.5 ± 5.1	9.0 ± 3.4	12.6 ± 4.2	9 ± 3
Female (n): Male (n)		11:1	10:1	10:3	6:3	10:59

## Supplementary Table S2

Patient ID	Date	Disease	age	Disease Duration (yrs)	Gender	Joints	ESR	CRP	Medication history
RD00444 Pre	25/7/16	Poly JIA, RF+	16.5	11.8	F	5	Not done	Not done	Sulfasalazine, MTX, Folic acid, HCQ
RD00444 Post	10/2/17	Poly JIA, RF+	17.0	12.4	F	0	48	2	MTX, Folic acid, <b>Enbrel</b>
RD05137 Pre	11/3/16	Poly JIA, RF+	10.9	0.1	F	4	26	1.5	-
RD05137 Post	15/9/16	Poly JIA, RF+	11.4	0.6	F	0	7	<0.2	<b>Enbrel</b> , MTX, Folic acid
RD04080 Pre	13/4/16	Oligo JIA, Extended	13.6	2.4	F	4	47	18.2	MTX, Prednisolone, Omeprazole, Folic acid
RD04080 Post	26/10/16	Oligo JIA, Extended	14.1	2.9	F	0	21	5.7	MTX, Folic acid, <b>Enbrel</b>
RD05336 Pre	4/8/16	Oligo JIA, Extended	1.9	0.1	F	8	97	49.3	Brufen
RD05336 Post	10/2/17	Oligo JIA, Extended	2.4	0.6	F	0	8	0.4	<b>Enbrel</b>

## Supplementary Table S3

Targets	Metal Channel	Staining	Clone	Antibody Vendor/Catalogue number
<b>Lineage markers</b>				
CD3	139	Surface/Intra	UCHT1	Biologend (300402)
CD4	148	Surface/Intra	SK3	Biologend (344625)
CD8	144	Surface	SK1	Biologend (344727)
CD11b	161	Surface	ICRF44	Biologend (301302)
CD16	209	Surface	3G8	Fluidigm (3209002B)
CD14	112/114	Surface	TuK4	Thermofisher/Invitrogen (Q10064)
<b>T helper subsets</b>				
IL-4	156	Intra	8D4-8	Biologend (500707)
IFN-g	168	Intra	B27	Biologend (506513)
IL-17A	169	Intra	BL168	Biologend (512302)
IL-21	151	Intra	3A4-N2	Biologend (513009)
CD161	157	Surface	HP-3G10	Biologend (339902)
<b>T cell functional</b>				
CD45RA	171	Surface	HI100	Biologend (304102)
CD69	176	Surface	FN50	Biologend (310902)
CD28	146	Surface	CD28.2	Biologend (302923)
CD152 (CTLA4)	155	Intra	BNI3	Biologend (555851)
CD154 (CD40L)	149	Surface	24-31	Biologend (310835)
HLA-DR	143	Surface	L243	Biologend (307612)
LAG3	159	Surface	17B4	Abcam (ab40466)
PD1	147	Surface	EH12.2H7	Biologend (329941)
Ki67	166	Intra	20Raj1	Thermofisher/ebioscience (14-5699-82)
ICOS	154	Surface	C398.4A	Biologend (313512)
CD31	172	Surface	WM59	Biologend (303102)
CD103	142	Surface	B-Ly7	Thermofisher/ebioscience (14-1038-82)
<b>Chemokine receptors</b>				
CXCR3	163	Surface	G025H7	Biologend (353718)
CXCR5	160	Surface	RF8B2	BD biosciences (552032)
CCR5	145	Surface	NP-6G4	Abcam (ab115738)
CCR6	170	Surface	G034E3	Biologend (353402)
<b>Treg markers</b>				
CD25	150	Surface	M-A251	BD biosciences (555429)
CD127	153	Surface	A019D5	Biologend (351302)
FoxP3	165	Intra	PCH10L	Thermofisher/ebioscience (14-4776-82)
GITR	164	Surface	621	Biologend (311602)
TGF-B (LAP)	175	Surface/Intra	TW4-2F8	Biologend (349602)
IL-10	158	Intra	JES3-9D7	Biologend (501402)
<b>Cytokines/Enzymes</b>				
TNF $\alpha$	152	Intra	Mab11	Biologend (502902)
IL-6	162	Intra	MQ2-13A5	Thermofisher/ebioscience (16-7069-85)
Granzyme B	173	Intra	CLB-GB11	Abcam (ab103159)
Perforin	174	Intra	B-D48	Abcam (ab47225)
<b>Barcodes</b>				
CD45-A	89	Surface	HI30	Fluidigm (3089003B)
CD45-B,C or D	115, 141, 167	Surface	HI30	Biologend (304002)
<b>Live/Dead /Singlets</b>				
DNA (Singlets)	191/193	-	Nil	Fluidigm Cell-ID Intercalator-Ir (201192B)
Cisplatin (Live/Dead)	195	-	Nil	Sigma-aldrich (479306-1G)

## Supplementary Table S4

Category	Term	Count	%	P-Value	Benjamin
<b>TCR activation</b>					
KEGG_PATHWAY	<a href="#">T cell receptor signaling pathway</a>	10	13.2	4.7E-07	3.9E-06
GOTERM_BP_DIRECT	<a href="#">T cell receptor signaling pathway</a>	8	10.5	4.3E-06	3.5E-04
REACTOME_PATHWAY	<a href="#">R-HSA-202424 (Downstream TCR signaling)</a>	6	7.9	5.6E-04	9.4E-03
BIOCARTA	<a href="#">T Cell Receptor Signaling Pathway</a>	5	6.6	4.6E-02	2.4E-01
<b>Apoptosis</b>					
UP_KEYWORDS	<a href="#">Apoptosis</a>	15	19.7	7.3E-09	2.6E-07
GOTERM_BP_DIRECT	<a href="#">apoptotic process</a>	14	18.4	1.2E-06	1.4E-04
GOTERM_BP_DIRECT	<a href="#">negative regulation of apoptotic process</a>	11	14.5	3.3E-05	1.8E-03
GOTERM_BP_DIRECT	<a href="#">positive regulation of apoptotic process</a>	10	13.2	7.4E-06	4.6E-04
GOTERM_BP_DIRECT	<a href="#">regulation of apoptotic process</a>	9	11.8	4.8E-06	3.5E-04
KEGG_PATHWAY	<a href="#">Apoptosis</a>	6	7.9	2.9E-04	1.2E-03
GOTERM_BP_DIRECT	<a href="#">apoptotic signaling pathway</a>	5	6.6	2.8E-04	9.7E-03
GOTERM_BP_DIRECT	<a href="#">activation of cysteine-type endopeptidase activity involved in apoptotic process</a>	4	5.3	6.1E-03	9.6E-02
BIOCARTA	<a href="#">Neuropeptides VIP and PACAP inhibit the apoptosis of activated T cells</a>	4	5.3	4.6E-02	2.5E-01
BIOCARTA	<a href="#">Induction of apoptosis through DR3 and DR4/5 Death Receptors</a>	4	5.3	8.2E-02	3.6E-01
<b>TNF-alpha signalling</b>					
KEGG_PATHWAY	<a href="#">TNF signaling pathway</a>	15	19.7	6.7E-13	1.0E-10
BIOCARTA	<a href="#">TNFR2 Signaling Pathway</a>	8	10.5	4.8E-07	7.4E-05
BIOCARTA	<a href="#">TNF/Stress Related Signaling</a>	8	10.5	6.2E-06	3.2E-04
GOTERM_BP_DIRECT	<a href="#">tumor necrosis factor-mediated signaling pathway</a>	7	9.2	1.4E-05	8.5E-04
GOTERM_BP_DIRECT	<a href="#">cellular response to tumor necrosis factor</a>	5	6.6	1.5E-03	3.6E-02
<b>NF-kB signalling</b>					
KEGG_PATHWAY	<a href="#">Toll-like receptor signaling pathway</a>	11	14.5	4.8E-08	5.3E-07
KEGG_PATHWAY	<a href="#">NF-kappa B signaling pathway</a>	11	14.5	7.0E-09	1.2E-07
KEGG_PATHWAY	<a href="#">NOD-like receptor signaling pathway</a>	10	13.2	1.7E-09	5.2E-08
GOTERM_BP_DIRECT	<a href="#">positive regulation of NF-kappaB transcription factor activity</a>	10	13.2	7.5E-09	2.0E-06
GOTERM_BP_DIRECT	<a href="#">positive regulation of I-kappaB kinase/NF-kappaB signaling</a>	9	11.8	5.9E-07	7.6E-05
KEGG_PATHWAY	<a href="#">RIG-I-like receptor signaling pathway</a>	9	11.8	2.7E-07	2.7E-06
REACTOME_PATHWAY	<a href="#">R-HSA-445989 (TAK1 activates NFkB by phosphorylation and activation of IKKs complex)</a>	8	10.5	7.8E-10	2.0E-07
REACTOME_PATHWAY	<a href="#">R-HSA-168638 (NOD1/2 Signaling Pathway)</a>	7	9.2	1.2E-07	1.5E-05
KEGG_PATHWAY	<a href="#">Cytosolic DNA-sensing pathway</a>	7	9.2	2.9E-05	1.6E-04
BIOCARTA	<a href="#">NF-kB Signaling Pathway</a>	7	9.2	4.8E-05	1.5E-03
REACTOME_PATHWAY	<a href="#">R-HSA-1810476 (RIP-mediated NFkB activation via ZBP1)</a>	6	7.9	2.2E-07	1.8E-05
REACTOME_PATHWAY	<a href="#">R-HSA-933542 (TRAF6 mediated NF-kB activation)</a>	6	7.9	4.5E-07	2.8E-05
REACTOME_PATHWAY	<a href="#">R-HSA-2871837 (FCERI mediated NF-kB activation)</a>	6	7.9	2.2E-03	2.7E-02
GOTERM_BP_DIRECT	<a href="#">nucleotide-binding oligomerization domain containing signaling pathway</a>	5	6.6	4.3E-06	3.3E-04
GOTERM_BP_DIRECT	<a href="#">I-kappaB kinase/NF-kappaB signaling</a>	5	6.6	1.5E-04	6.4E-03
GOTERM_BP_DIRECT	<a href="#">NIK/NF-kappaB signaling</a>	4	5.3	3.2E-03	6.1E-02
GOTERM_BP_DIRECT	<a href="#">negative regulation of NF-kappaB transcription factor activity</a>	4	5.3	3.9E-03	7.2E-02
REACTOME_PATHWAY	<a href="#">R-HSA-5668541 (TNFR2 non-canonical NF-kB pathway)</a>	4	5.3	1.1E-02	8.9E-02
<b>MAPK signalling</b>					
KEGG_PATHWAY	<a href="#">MAPK signaling pathway</a>	9	11.8	2.8E-03	8.9E-03
BIOCARTA	<a href="#">MAPKinase Signaling Pathway</a>	7	9.2	5.1E-02	2.6E-01
GOTERM_BP_DIRECT	<a href="#">MAPK cascade</a>	5	6.6	3.0E-02	3E-01
GOTERM_BP_DIRECT	<a href="#">positive regulation of MAPK cascade</a>	4	5.3	5.7E-03	9.1E-02
GOTERM_BP_DIRECT	<a href="#">activation of MAPK activity</a>	4	5.3	1.2E-02	1.6E-01

## Supplementary Table S5

Category	Term	Count	%	P-Value	Benjamin
<b>TCR activation</b>					
KEGG_PATHWAY	<a href="#">T cell receptor signaling pathway</a>	12	13.3	1.8E-08	1.6E-07
GOTERM_BP_DIRECT	<a href="#">T cell receptor signaling pathway</a>	10	11.1	8.8E-08	1.4E-05
REACTOME_PATHWAY	<a href="#">R-HSA-202424 (Downstream TCR signaling)</a>	7	7.8	1.4E-04	3.4E-03
BIOCARTA	<a href="#">T Cell Receptor Signaling Pathway</a>	7	7.8	4.6E-03	5.2E-02
<b>Apoptosis</b>					
UP_KEYWORDS	<a href="#">Apoptosis</a>	18	20.0	1.2E-10	6.1E-09
GOTERM_BP_DIRECT	<a href="#">apoptotic process</a>	17	18.9	4.2E-08	7.2E-06
GOTERM_BP_DIRECT	<a href="#">regulation of apoptotic process</a>	12	13.3	1.6E-08	3.2E-06
GOTERM_BP_DIRECT	<a href="#">negative regulation of apoptotic process</a>	12	13.3	2.8E-05	1.3E-03
GOTERM_BP_DIRECT	<a href="#">positive regulation of apoptotic process</a>	11	12.2	4.2E-06	3.2E-04
KEGG_PATHWAY	<a href="#">Apoptosis</a>	6	6.7	6.7E-04	2.5E-03
GOTERM_BP_DIRECT	<a href="#">apoptotic signaling pathway</a>	5	5.6	5.5E-04	1.3E-02
GOTERM_BP_DIRECT	<a href="#">activation of cysteine-type endopeptidase activity involved in apoptotic process</a>	5	5.6	9.8E-04	2.1E-02
GOTERM_BP_DIRECT	<a href="#">positive regulation of apoptotic signaling pathway</a>	4	4.4	3.0E-04	9.3E-03
GOTERM_BP_DIRECT	<a href="#">extrinsic apoptotic signaling pathway via death domain receptors</a>	4	4.4	1.1E-03	2.3E-02
GOTERM_BP_DIRECT	<a href="#">intrinsic apoptotic signaling pathway in response to DNA damage</a>	4	4.4	2.0E-03	3.7E-02
BIOCARTA	<a href="#">Neuropeptides VIP and PACAP inhibit the apoptosis of activated T cells</a>	4	4.4	6.8E-02	3.1E-01
<b>TNF-alpha signalling</b>					
KEGG_PATHWAY	<a href="#">TNF signaling pathway</a>	16	17.8	5.3E-13	2.7E-11
BIOCARTA	<a href="#">TNFR2 Signaling Pathway</a>	9	10.0	7.1E-08	1.1E-05
BIOCARTA	<a href="#">TNF/Stress Related Signaling</a>	8	8.9	1.9E-05	7.6E-04
GOTERM_BP_DIRECT	<a href="#">tumor necrosis factor-mediated signaling pathway</a>	7	7.8	3.8E-05	1.7E-03
GOTERM_BP_DIRECT	<a href="#">cellular response to tumor necrosis factor</a>	6	6.7	3.0E-04	9.3E-03
GOTERM_BP_DIRECT	<a href="#">regulation of tumor necrosis factor-mediated signaling pathway</a>	4	4.4	5.3E-04	1.3E-02
REACTOME_PATHWAY	<a href="#">R-HSA-5357905 (Regulation of TNFR1 signaling)</a>	4	4.4	2.2E-03	2.7E-02
<b>NF-kB signalling</b>					
KEGG_PATHWAY	<a href="#">Toll-like receptor signaling pathway</a>	14	15.6	1.4E-10	3.6E-09
GOTERM_BP_DIRECT	<a href="#">positive regulation of I-kappaB kinase/NF-kappaB signaling</a>	12	13.3	8.6E-10	2.4E-07
KEGG_PATHWAY	<a href="#">NF-kappa B signaling pathway</a>	12	13.3	3.0E-09	3.8E-08
KEGG_PATHWAY	<a href="#">NOD-like receptor signaling pathway</a>	11	12.2	4.1E-10	7.9E-09
GOTERM_BP_DIRECT	<a href="#">positive regulation of NF-kappaB transcription factor activity</a>	11	12.2	2.1E-09	4.8E-07
KEGG_PATHWAY	<a href="#">RIG-I-like receptor signaling pathway</a>	11	12.2	4.9E-09	5.7E-08
KEGG_PATHWAY	<a href="#">Cytosolic DNA-sensing pathway</a>	10	11.1	3.5E-08	3.0E-07
REACTOME_PATHWAY	<a href="#">R-HSA-445989 (TAK1 activates NFkB by phosphorylation and activation of IKKs complex)</a>	8	8.9	2.6E-09	7.5E-07
REACTOME_PATHWAY	<a href="#">R-HSA-168638 (NOD1/2 Signaling Pathway)</a>	8	8.9	1.0E-08	1.5E-06
BIOCARTA	<a href="#">NF-kB Signaling Pathway</a>	7	7.8	1.2E-04	3.9E-03
REACTOME_PATHWAY	<a href="#">R-HSA-1810476 (RIP-mediated NFkB activation via ZBP1)</a>	6	6.7	5.0E-07	4.8E-05
REACTOME_PATHWAY	<a href="#">R-HSA-933542 (TRAF6 mediated NF-kB activation)</a>	6	6.7	1.0E-06	7.5E-05
REACTOME_PATHWAY	<a href="#">R-HSA-2871837 (FCERI mediated NF-kB activation)</a>	6	6.7	4.5E-03	4.9E-02
GOTERM_BP_DIRECT	<a href="#">nucleotide-binding oligomerization domain containing signaling pathway</a>	5	5.6	8.6E-06	5.4E-04
GOTERM_BP_DIRECT	<a href="#">TRIF-dependent toll-like receptor signaling pathway</a>	5	5.6	1.4E-05	7.9E-04
GOTERM_BP_DIRECT	<a href="#">I-kappaB kinase/NF-kappaB signaling</a>	5	5.6	2.9E-04	9.2E-03
GOTERM_BP_DIRECT	<a href="#">NIK/NF-kappaB signaling</a>	5	5.6	4.1E-04	1.1E-02
REACTOME_PATHWAY	<a href="#">R-HSA-5357956 (TNFR1-induced NFkappaB signaling pathway)</a>	4	4.4	1.7E-03	2.6E-02
GOTERM_BP_DIRECT	<a href="#">negative regulation of NF-kappaB transcription factor activity</a>	4	4.4	6.3E-03	9.2E-02
REACTOME_PATHWAY	<a href="#">R-HSA-5668541 (TNFR2 non-canonical NF-kB pathway)</a>	4	4.4	1.7E-02	1.3E-01
<b>MAPK signalling</b>					
KEGG_PATHWAY	<a href="#">MAPK signaling pathway</a>	9	10.0	8.4E-03	2.3E-02
GOTERM_BP_DIRECT	<a href="#">MAPK cascade</a>	7	7.8	2.7E-03	4.6E-02
BIOCARTA	<a href="#">MAPKinase Signaling Pathway</a>	7	7.8	9.7E-02	3.8E-01
GOTERM_BP_DIRECT	<a href="#">activation of MAPK activity</a>	5	5.6	2.5E-03	4.4E-02
GOTERM_BP_DIRECT	<a href="#">positive regulation of MAPK cascade</a>	4	4.4	9.1E-03	1.2E-01
REACTOME_PATHWAY	<a href="#">R-HSA-5673001 (RAF/MAP kinase cascade)</a>	4	4.4	6.4E-02	3.4E-01

## Supplementary Table S6

Category	Term	Count	%	P-Value	Benjamini
<b>TCR Activation</b>					
KEGG_PATHWAY	<a href="#">T cell receptor signaling pathway</a>	8	15.1	3.2E-06	2.8E-05
GOTERM_BP_DIRECT	<a href="#">T cell receptor signaling pathway</a>	7	13.2	6.2E-06	5.8E-04
REACTOME_PATHWAY	<a href="#">R-HSA-202424 (Downstream TCR signaling)</a>	5	9.4	1.2E-03	2.2E-02
BIOCARTA	<a href="#">T Cell Receptor Signaling Pathway</a>	4	7.5	4.9E-02	2.1E-01
<b>Apoptosis</b>					
GOTERM_BP_DIRECT	<a href="#">apoptotic process</a>	14	26.4	1.2E-08	3.8E-06
UP_KEYWORDS	<a href="#">Apoptosis</a>	13	24.5	6.9E-09	2.9E-07
GOTERM_BP_DIRECT	<a href="#">regulation of apoptotic process</a>	9	17.0	2.7E-07	4.3E-05
GOTERM_BP_DIRECT	<a href="#">positive regulation of apoptotic process</a>	7	13.2	3.2E-04	1.2E-02
GOTERM_BP_DIRECT	<a href="#">negative regulation of apoptotic process</a>	7	13.2	2.7E-03	6.8E-02
KEGG_PATHWAY	<a href="#">Apoptosis</a>	6	11.3	4.1E-05	2.7E-04
GOTERM_BP_DIRECT	<a href="#">activation of cysteine-type endopeptidase activity involved in apoptotic process</a>	5	9.4	1.3E-04	5.6E-03
BIOCARTA	<a href="#">Neuropeptides VIP and PACAP inhibit the apoptosis of activated T cells</a>	4	7.5	1.2E-02	7.5E-02
BIOCARTA	<a href="#">Induction of apoptosis through DR3 and DR4/5 Death Receptors</a>	4	7.5	2.3E-02	1.2E-01
<b>TNF-alpha Signalling</b>					
KEGG_PATHWAY	<a href="#">TNF signaling pathway</a>	11	20.8	7.5E-10	2.2E-08
BIOCARTA	<a href="#">TNF/Stress Related Signaling</a>	8	15.1	1.7E-07	1.0E-05
BIOCARTA	<a href="#">TNFR2 Signaling Pathway</a>	6	11.3	1.3E-05	4.0E-04
GOTERM_BP_DIRECT	<a href="#">cellular response to tumor necrosis factor</a>	4	7.5	4.8E-03	9.9E-02
GOTERM_BP_DIRECT	<a href="#">tumor necrosis factor-mediated signaling pathway</a>	4	7.5	5.8E-03	1.1E-01
<b>NF-KB Signalling</b>					
KEGG_PATHWAY	<a href="#">NF-kappa B signaling pathway</a>	11	20.8	1.0E-10	1.5E-08
KEGG_PATHWAY	<a href="#">Toll-like receptor signaling pathway</a>	11	20.8	7.5E-10	2.2E-08
KEGG_PATHWAY	<a href="#">RIG-I-like receptor signaling pathway</a>	10	18.9	3.5E-10	1.7E-08
GOTERM_BP_DIRECT	<a href="#">positive regulation of I-kappaB kinase/NF-kappaB signaling</a>	10	18.9	1.4E-09	1.3E-06
GOTERM_BP_DIRECT	<a href="#">positive regulation of NF-kappaB transcription factor activity</a>	8	15.1	1.7E-07	3.1E-05
KEGG_PATHWAY	<a href="#">NOD-like receptor signaling pathway</a>	9	17.0	1.4E-09	3.3E-08
REACTOME_PATHWAY	<a href="#">R-HSA-168638 (NOD1/2 Signaling Pathway)</a>	7	13.2	1.2E-08	2.7E-06
REACTOME_PATHWAY	<a href="#">R-HSA-933542 (TRAF6 mediated NF-kB activation)</a>	6	11.3	6.6E-08	7.5E-06
REACTOME_PATHWAY	<a href="#">R-HSA-445989 (TAK1 activates NFkB by phosphorylation and activation of IKKs complex)</a>	6	11.3	2.2E-07	1.6E-05
BIOCARTA	<a href="#">NF-kB Signaling Pathway</a>	6	11.3	4.8E-05	1.2E-03
REACTOME_PATHWAY	<a href="#">R-HSA-1810476 (RIP-mediated NFkB activation via ZBP1)</a>	5	9.4	2.2E-06	1.0E-04
REACTOME_PATHWAY	<a href="#">R-HSA-2871837 (FCERI mediated NF-kB activation)</a>	5	9.4	3.6E-03	4.7E-02
GOTERM_BP_DIRECT	<a href="#">nucleotide-binding oligomerization domain containing signaling pathway</a>	4	7.5	6.1E-05	3.6E-03
GOTERM_BP_DIRECT	<a href="#">toll-like receptor signaling pathway</a>	4	7.5	7.8E-05	4.0E-03
GOTERM_BP_DIRECT	<a href="#">TRIF-dependent toll-like receptor signaling pathway</a>	4	7.5	8.7E-05	4.3E-03
GOTERM_BP_DIRECT	<a href="#">NIK/NF-kappaB signaling</a>	4	7.5	1.1E-03	3.4E-02
<b>MAPK Signalling</b>					
KEGG_PATHWAY	<a href="#">MAPK signaling pathway</a>	8	15.1	1.0E-03	4.6E-03
BIOCARTA	<a href="#">MAPKinase Signaling Pathway</a>	7	13.2	4.9E-03	3.9E-02
BIOCARTA	<a href="#">Human Cytomegalovirus and Map Kinase Pathways</a>	4	7.5	3.6E-03	3.3E-02
GOTERM_BP_DIRECT	<a href="#">activation of MAPK activity</a>	4	7.5	4.4E-03	9.4E-02
GOTERM_BP_DIRECT	<a href="#">MAPK cascade</a>	4	7.5	4.7E-02	4.3E-01