No	equation	τ	description	reference	new
1	hk = CBP	0	basal expression	-	
2	hk = CD14	0	basal expression	-	
3	hk = Jak1	0	basal expression	-	
4	hk = Jak2	0	basal expression	-	
5	hk = Jak3	0	basal expression	-	
6	hk = LBP	0	basal expression	-	
7	hk = Mal	0	basal expression	-	
8	hk = MD2	0	basal expression	-	
9	hk = MyD88	0	basal expression	-	
10	hk = p300	0	basal expression	-	
11	hk = RIP1	0	basal expression	-	
12	hk = Src	0	basal expression	-	
13	hk = TLR4	0	basal expression	-	
14	hk = TRAM	0	basal expression	-	
15	hk = TRIF	0	basal expression	-	
16	hk = Tyk2	0	basal expression	-	
17	!hk = PP2A	0	basal expression	-	
18	!hk = PTEN	0	basal expression	-	
19	!hk = RIP3	0	basal expression	-	
20	!hk = SHP1	0	basal expression	-	
21	LBP + CD14 + TLR4 + MD2 + !SIGIRR + !ST2 + LPS = TLR4RC	1	early TLR4 signaling	[1, 2]	
22	TLR4RC + Mal + MyD88 + !MyD88s = IRAK4	1	early TLR4 signaling	[1, 2]	
23	TLR4RC = coSignal	1	early TLR4 signaling	-	
24	TLR4RC = PI3K	1	early TLR4 signaling	[3, 4]	
25	IRAK4 + !IRAKM + !IRAK2c + !IRAK2d = IRAK1	1	early TLR4 signaling	[1, 2]	
26	IRAK1 = TRAF6	1	early TLR4 signaling	[1, 2]	
27	TRAF6 = TAB	1	early TLR4 signaling	[1, 2]	
28	TRAF6 = TPL2	1	early TLR4 signaling	[1, 5]	
29	TAB = TAK1	1	early TLR4 signaling	[1, 2]	
30	TAK1 = IKK	1	early TLR4 signaling	[1, 2]	
31	TAK1 = TPL2	1	early TLR4 signaling	[1, 5]	
32	TAK1 = MKK3	1	early TLR4 signaling	[6, 7, 2]	
33	TAK1 = MKK4	1	early TLR4 signaling	[7]	
34	TAK1 = MKK6	1	early TLR4 signaling	[6, 7]	
35	TAK1 = MKK7	1	early TLR4 signaling	[7, 2]	
36	TPL2 = MKK1/2	1	early TLR4 signaling	[5]	
37	MKK1/2 = ERK	1	early TLR4 signaling	[1, 5]	
38	MKK3 + !dum_DUSP1_inh = p38	1	early TLR4 signaling	[6, 7, 2]	
39	MKK4 + !dum_DUSP1_inh = p38	1	early TLR4 signaling	[6, 7]	
40	MKK6 + !dum_DUSP1_inh = p38	1	early TLR4 signaling	[6, 7]	
41	MKK4 = JNK	1	early TLR4 signaling	[6, 8]	
42	MKK7 = JNK	1	early TLR4 signaling	[6, 8, 2]	
43	ERK = p90Rsk_lps	1	early TLR4 signaling	[5]	
44	ERK = MSK1	1	early TLR4 signaling	[5]	
45	p38 = MSK1	1	early TLR4 signaling	[6, 9]	
46	p38 = MSK2	1	early TLR4 signaling	[6]	

No	equation	τ	description	reference	new
47	p38 = MK2	1	early TLR4 signaling	[6, 9, 10]	
48	p38 = AP1	1	early TLR4 signaling	[11]	
49	JNK = cJun	1	early TLR4 signaling	[8]	
50	JNK = ATF2	1	early TLR4 signaling	[8]	
51	cJun + ATF2 = AP1	1	early TLR4 signaling	[8]	
52	MSK1 + p90Rsk_lps = CREB	1	early TLR4 signaling	[5, 9]	
53	!MK2 = MK3	1	early TLR4 signaling	[6]	
54	!MK2 = TTP	1	early TLR4 signaling	[6, 9, 10]	
55	IKK = IkBa	1	early TLR4 signaling	[1, 2]	
56	IkBa + !dum_IkBa_inh + !MK3 + miR155 = NFkB	1	early TLR4 signaling	[1, 12, 13, 14, 2, 15]	
57	IL4 = IL4Ra/IL2Ry	1	IL-4/13 signaling	[16]	
58	IL4 = IL4Ra/IL13Ra1	1	IL-4/13 signaling	[16]	
59	IL13 = IL4Ra/IL13Ra1	1	IL-4/13 signaling	[16]	
60	IL13 = IL13Ra2	1	IL-4/13 signaling	[16]	
61	IL4Ra/IL2Ry + Jak1 + !PP2A + !SHP1 + !dum_Socs1_inh = Stat6	1	IL-4/13 signaling	[17, 18, 19]	
62	IL4Ra/IL2Ry + Jak3 + !PP2A + !SHP1 + !dum_Socs1_inh = Stat6	1	IL-4/13 signaling	[17, 18, 19]	
63	IL4Ra/IL13Ra1 + Jak1 + !PP2A + !SHP1 + !dum_Socs1_inh = Stat6	1	IL-4/13 signaling	[17, 18, 19]	
64	IL4Ra/IL13Ra1 + Jak2 + !PP2A + !SHP1 + !dum_Socs1_inh = Stat6	1	IL-4/13 signaling	[17, 18, 19]	
65	IL4Ra/IL13Ra1 + Tyk2 + !PP2A + !SHP1 + !dum_Socs1_inh = Stat6	1	IL-4/13 signaling	[17, 18, 19]	
66	IL4Ra/IL2Ry + Jak1 = Fes	1	IL-4/13 signaling	[19, 20]	
67	IL4Ra/IL2Ry + Jak3 = Fes	1	IL-4/13 signaling	[19, 20]	
68	Fes = IRS1/2	1	PI3K/Akt signaling	[20, 21]	
69	IRS1/2 = PI3K	1	PI3K/Akt signaling	[20, 21]	
70	PI3K = PIP3	1	PI3K/Akt signaling	[21, 22]	
71	PIP3 = PDK1	1	PI3K/Akt signaling	[21, 22]	
72	PDK1 = PKC	1	PI3K/Akt signaling	[23, 22]	
73	PDK1 = p70S6K	1	PI3K/Akt signaling	[23, 21]	
74	PDK1 = p90Rsk_il	1	PI3K/Akt signaling	[20]	
75	PDK1 + !PTEN = Akt1	1	PI3K/Akt signaling	[24, 21, 25, 22]	
76	PDK1 + !PTEN = Akt2	1	PI3K/Akt signaling	[24, 21, 25, 22]	
77	!Akt1 = miR155	1	PI3K/Akt signaling	[26, 15]	
78	Akt2 + coSignal = miR155	1	PI3K/Akt signaling	[26, 15]	
79	!miR155 = CEBPb	1	PI3K/Akt signaling	[26, 15]	
80	IFNb_medium = IFNAR	1	type I IFN signaling	[6, 27]	
81	IFNAR + Jak1 + !dum_Socs1_inh = Stat1	1	type I IFN signaling	[19, 27]	
82	IFNAR + Tyk2 + !dum_Socs1_inh = Stat1	1	type I IFN signaling	[19, 27]	
83	IFNAR + Jak1 + !dum_Socs3_inh = Stat3	1	type I IFN signaling	[19, 27]	
84	IFNAR + Tyk2 + !dum_Socs3_inh = Stat3	1	type I IFN signaling	[19, 27]	
85	IL10_medium = IL10R	1	IL-10 signaling	[6, 28]	
86	Jak1 + IL10R = Stat3	1	IL-10 signaling	[6, 28]	
87	TLR4RC + TRAM + TRIF + !TRIAD3A = TRAF6	2	late TLR4 signaling	[1, 29, 2]	

No	equation	τ	description	reference	new
88	TLR4RC + TRAM + TRIF + !TRIAD3A = TBK1	2	late TLR4 signaling	[1, 2]	
89	TRAF6 + RIP1 + !IL1rn = IKK	2	late TLR4 signaling	[1, 2]	
90	TBK1 + !MK3 = IRF3	2	late TLR4 signaling	[1, 30, 29, 2]	
91	NFkB + IRF3 + p300 + CBP = IFNbmRNA	5	TLR4 signaling	[6, 31]	
92	NFkB = IkBamRNA	5	TLR4 signaling	[1, 2]	
93	NFkB = DUSP1mRNA_NFkB	5	TLR4 signaling	[32]	
94	NFkB = IL1bmRNA	5	TLR4 signaling	[1, 6]	
95	NFkB + MSK1 = IL1rnmRNA_NFkB	5	TLR4 signaling	[6, 33]	#1
96	NFkB = Ccl2/3/4/5/7mRNA	5	TLR4 signaling	[14]	#2
97	NFkB = Cxcl1/2/3mRNA	5	TLR4 signaling	[14]	#3
98	NFkB + AP1 + CREB = IL6mRNA	5	TLR4 signaling	[1, 8]	
99	NFkB = TNFamRNA	5	TLR4 signaling	[1]	
100	MK2 = IL10mRNA_MK2	5	TLR4 signaling	data	*
101	MK2 = Socs3mRNA_MK2	5	TLR4 signaling	data	*
102	Stat6 + CEBPb= Arg1mRNA	5	IL-4/13 signaling	[14, 15]	
103	Stat6 = Mrc1mRNA	5	IL-4/13 signaling	[14]	
104	Stat6 = Ccl2/7mRNA_Stat6	5	IL-4/13 signaling	data, [14]	#4
105	Stat6 = Socs1mRNA	5	IL-4/13 signaling	[17]	
106	Stat6 = Socs2mRNA	5	IL-4/13 signaling	[17, 34]	
107	Stat1 = IL1rnmRNA_Stat	5	IFNβ signaling	data	*
108	Stat1 = Socs1mRNA	5	IFNβ signaling	[35]	
109	Stat1 = Ccl5mRNA_Stat1	5	IFNβ signaling	[14]	
110	Stat3 = IL10mRNA_Stat3	5	IFN/IL-10 signaling	[6]	
111	Stat3 + Src = Socs3mRNA_Stat3	5	IFN/IL-10 signaling	[6, 36, 37]	#5
112	Stat3 = Socs1mRNA	5	IFN/IL-10 signaling	[35]	
113	Stat3 = DUSP1mRNA_Stat3	5	IFN/IL-10 signaling	[6, 37]	
114	Stat3 = IL1rnmRNA_Stat	5	IFN/IL-10 signaling	data	*
115	IL10R = Arg1mRNA	5	IL-10 signaling	[38]	
116	IFNbmRNA = IFNb_syn	7	TLR4 signaling	[6, 31]	
117	IkBabmRNA = IkBa_syn	7	TLR4 signaling	[1, 2]	
118	DUSP1mRNA_NFkB = DUSP1_NFkB	7	TLR4 signaling	[6, 32]	
119	IL1bmRNA = IL1b_syn	7	TLR4 signaling	[1, 6]	
120	IL1rnmRNA_NFkB = IL1rn_NFkB	7	TLR4 signaling	[6, 33]	#6
121	Ccl2/3/4/5/7mRNA = Ccl2/3/4/5/7	7	TLR4 signaling	[14]	#7
122	Cxcl1/2/3mRNA = Cxcl1/2/3	7	TLR4 signaling	[14]	#8
123	IL6mRNA + !TTP = IL6_syn	7	TLR4 signaling	[1, 6]	
124	TNFamRNA + !TTP = TNFa	7	TLR4 signaling	[1, 6, 9, 10]	
125	IL10mRNA_MK2 + !TTP = IL10_MK2	7	TLR4 signaling	[39, 6]	*
126	Socs3mRNA_MK2 = Socs3_MK2	7	TLR4 signaling	-	*
127	Arg1mRNA = Arg1	7	IL-4/13 signaling	[14]	
128	Mrc1mRNA = Mrc1	7	IL-4/13 signaling	[14]	
129	Ccl2/7mRNA_Stat6 = Ccl2/7_Stat6	7	IL-4/13 signaling	[14]	#9
130	Socs2mRNA = Socs2	7	IL-4/13 signaling	[34]	
131	Socs1mRNA = Socs1	7	IL/IFNβ signaling	[34]	
132	Ccl5mRNA_Stat1 = Ccl5_Stat1	7	IFN/IL-10 signaling	[14]	
133	IL1rnmRNA_Stat = IL1rn_Stat	7	IFN/IL-10 signaling	[14]	*

No	equation	τ	description	reference	new
134	DUSP1mRNA_Stat3 = DUSP1_Stat3	7	IFN/IL-10 signaling	[32, 6]	
135	IL10mRNA_Stat3 + !TTP = IL10_syn_Stat	7	IFN/IL-10 signaling	[6]	#10
136	Socs3mRNA_Stat3 = Socs3_Stat3	7	IFN/IL-10 signaling	[34]	#11
137	IFNb_syn = IFNb_medium	10	protein secretion	[6]	
138	IL10_syn_MK2 = IL10_medium	10	protein secretion	[6]	*
139	IL10_syn_Stat3 = IL10_medium	12	protein secretion	[6]	#12
140	hk_medium + LPS = IFNb_medium	15	maintain secreted proteins	-	
141	hk_medium + LPS = IL10_medium	15	maintain secreted proteins	-	
142	DUSP1_NFkB = dum_DUSP1_inh	15	activation of the inhibitory dummy species	-	
143	DUSP1_Stat3 = dum_DUSP1_inh	15	activation of the inhibitory dummy species	-	
144	hk_inh + LPS = dum_DUSP1_inh	15	maintain inhibitory species at $\tau = 15$	-	
145	IkBa = dum_IkBa_inh	15	activation of the inhibitory dummy species	-	
146	hk_inh + LPS = dum_IkBa_inh	15	maintain inhibitory species at $\tau = 15$	-	
147	Socs1 = dum_Socs1_inh	15	activation of the inhibitory dummy species	-	
148	hk_inh + LPS = dum_Socs1_inh	15	maintain inhibitory species at $\tau = 15$	-	
149	hk_inh + IL4 = dum_Socs1_inh	15	maintain inhibitory species at $\tau = 15$	-	
150	Socs3_MK2 = dum_Socs3_inh	15	activation of the inhibitory dummy species	-	*
151	Socs3_Stat3 = dum_Socs3_inh	15	activation of the inhibitory dummy species	-	#13
152	hk_inh + LPS = dum_Socs3_inh	15	maintain inhibitory species at $\tau = 15$	-	

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