Table 2. Complete dynamics table of the CD4+ T cell differentiation model.

Reaction Code	Law of the reaction	Type of reaction	Kinetic Parameter	Parameter Value	Specie represented	Modulation role
re2	IL18 + IL18R = IL18-IL18R	ACT/INH	re2.K	0.138094	STAT6-P	Inhibitor
re3	IRAK1 = IRAK1-P	ACT/INH	re3.K	2.01676	IL18-IL18R	Activator
re6	eIL12 = IL12	Mass Action	re6.K1	0.1	-	-
			re6.K2	0.1		
re8	IL12 + IL12R = IL12-IL12R	ACT/INH	re8.K1	2.94611	STAT6-P	Inhibitor
			re8.K2	0.743847	L-PPARg	Inhibitor
re9	p50 + p65 = 'p50/p65 dimer'	ACT/INH	re9.K1	0.1	L-PPARg	Inhibitor
			re9.K2	98.9482	A-FOXP3	Inhibitor
			re9.K3	0.0539426	IRAK1-P	Activator
re10	STAT4 = STAT4-P	ACT/INH	re10.K1	0.125481	IL21-IL21R	Inhibitor
			re10.K2	0.896854	GATA3-P	Inhibitor
			re10.K3	0.031433	IL12-IL12R	Activator
			re10.K4	66.6168	IL23-IL23R	Activator
re11	INFg + INFgR = INFg-INFgR	ACT/INH	re11.K	0.263953	SOCS1-JAKs	Inhibitor
re12	eINFg = INFg	Mass Action	re12.K1	0.1	-	-
			re12.K2	0.1		
re13	STAT1 = STAT1-P	ACT/INH	re13.K	0.1	L-PPARg	Inhibitor
			re13.K1	5.04432	IL21-IL21R	Activator
			re13.K2	0.0705365	INFg-INFgR	Activator
			re13.K3	14.9778	JAK1-P	Activator
re14	pINFg = INFg	ACT/INH	re14.K1	0.501917	anti-INFg	Inhibitor
			re14.K2	0.075552	STAT3-P	Inhibitor
			re14.K3	0.1	L-PPARg	Inhibitor
			re14.K4	0.001477	STAT4-P	Activator
			re14.K5	100	p50/p65 dimer	Activator
			re14.K6	0.230841	Tbet-P	Activator
re15	Tbet = Tbet-P	ACT/INH	re15.K1	0.916783	TGFb-TGFbR	Inhibitor
			re15.K2	0.010092	STAT3-P	Inhibitor
			re15.K3	3.58849	STAT4-P	Activator
			re15.K4	0.727962	STAT1-P	Activator
			re15.K5	6.97805	Tbet-P	Activator
re16	JAK1 = JAK1-P	ACT/INH	re16.K1	0.1	L-PPARg	Inhibitor
			re16.K2	0.004433	SOCS1-JAKs	Inhibitor
			re16.K3	99.987	INFg-INFgR	Activator
re17	SOCS1 = SOCS1-JAKs	ACT/INH	re17.K1	7.83763	STAT1-P	Activator
			re17.K2	0.667462	Tbet-P	Activator
re18	eIL4 = IL4	Mass Action	re18.K1	0.1	-	-
			re18.K2	0.1		
re19	IL4 + IL4R = IL4-IL4R	ACT/INH	re19.K	13.0657	SOCS1-JAKs	Inhibitor
re20	pIL4 = IL4	ACT/INH	re20.K1	0.210399	STAT4-P	Inhibitor
			re20.K2	56.3452	anti-IL4	Inhibitor
			re20.K3	98.0373	IL4	Activator
			re20.K4	0.855534	GATA3-P	Activator
			re20.K5	4.32731	STAT5-P	Activator
re23	GATA3 = GATA3-P	ACT/INH	re23.K1	0.199351	Tbet-P	Inhibitor
			re23.K2	9.61521	STAT3-P	Inhibitor
			re23.K3	0.214012	TGFb-TGFbR	Inhibitor
			re23.K4	0.321065	STAT6-P	Activator
			re23.K5	0.1	L-PPARg	Activator
re24	STAT6 = STAT6-P	ACT/INH	re24.K	0.1	INFg-INFgR	Inhibitor
			re24.K1	0.004304	IL4-IL4R	Activator
re25	IL2 + IL2R = IL2-IL2R	Mass Action	re25.K1	0.1	-	-
			re25.K2	0.1		
re26	STAT5 = STAT5-P	ACT/INH	re26.K	0.374591	IL2-IL2R	Activator
re27	FOXP3 = A-FOXP3	ACT/INH	re27.K1	100	STAT6-P	Inhibitor
			re27.K2	0.354892	STAT3-P	Inhibitor
			re27.K3	1.31281	IL6-IL6R	Inhibitor
			re27.K4	0.000679	TGFb-TGFbR	Activator
			re27.K5	2.07945	STAT1-P	Activator
			re27.K6	100	STAT5-P	Activator
			re27.K7	$1.93e^7$	L-PPARg	Activator
re28	TGFb + TGFbR = TGFb-TGFbR	Mass Action	re28.K1	0.1	-	-
			re28.K2	0.1		
re29	IL6 + IL6R = IL6-IL6R	Mass Action	re29.K1	0.1	-	-
			re29.K2	0.1		
re30	STAT3 = STAT3-P	ACT/INH	re30.K	0.1	L-PPARg	Inhibitor
			re30.K1	98.1345	IL21-IL21R	Activator
			re30.K2	39.018	IL23-IL23R	Activator
			re30.K3	0.59167	IL10-IL10R	Activator
			re30.K4	0.137545	IL6-IL6R	Activator
re31	RORgt = RORgt-Ligand	ACT/INH	re31.K1	9722.09	A-FOXP3	Inhibitor
			re31.K2	0.703778	L-PPARg	Inhibitor
			re31.K3	1.24123	STAT3-P	Activator
			re31.K4	997.263	TGFb-TGFbR	Activator
re32	IL21 + IL21R = IL21-IL21R	ACT/INH	re32.K	0.240705	STAT5-P	Inhibitor
			re32.K1	8.14189	IL17-IL17R	Activator
re33	eIL21 = IL21	Mass Action	re33.K1	0.1	-	-
			re33.K2	0.1		
re34	eIL23 = p40/p19 dimer	Mass Action	re34.K1	0.1	-	-
			re34.K2	0.1		
re35	p40/p19 dimer + IL23R = IL23-IL23R	ACT/INH	re35.K	4.66107	Tbet-P	Inhibitor
re36	p40 + p19 = 'p40/p19 dimer'	ACT/INH	re36.K	0.1	L-PPARg	Inhibitor
			re36.K1	25.5354	IL6-IL6R	Activator
re37	pIL21 = IL21	ACT/INH	re37.K	0.118892	STAT3-P	Activator
re38	IL10 + IL10R = IL10-IL10R	ACT/INH	re38.K1	0.00251	IL23-IL23R	Inhibitor

			re38.K2	0.1	L-PPARg	Activator
			re38.K3	42.5792	IL21-IL21R	Activator
			re38.K4	0.645162	GATA3-P	Activator
			re38.K5	100	STAT5-P	Activator
re42	PPARg + Ligand = L-PPARg	ACT/INH	re42.K	0.1	INFg-INFgR	Inhibitor
			re42.K1	0.1	IL4-IL4R	Activator
re44	eTGFb = TGFb	Mass Action	re44.K1	0.1	-	-
			re44.K2	0.1		
re45	eIL2 = IL2	Mass Action	re45.K1	0.1	-	-
			re45.K2	0.1		
re46	eIL6 = IL6	Mass Action	re46.K1	0.1	-	-
			re46.K2	0.1		
re47	eIL18 = IL18	Mass Action	re47.K1	0.1	-	-
			re47.K2	0.1		
re48	eIL10 = IL10	Mass Action	re48.K1	0.1	-	-
			re48.K2	0.1		
re49	eIL17 = IL17	Mass Action	re49.K1	0.1	-	-
			re49.K2	0.1		
re50	IL17 + IL17R = IL17-IL17R	Mass Action	re50.K1	0.1	-	-
			re50.K2	0.1		
re51	pIL17 = IL17	ACT/INH	re51.K	0.1	L-PPARg	Inhibitor
			re51.K1	1.62893	IL23-IL23R	Activator
			re51.K2	0.279174	RORgt-L	Activator
			re51.K3	5.47889	STAT4-P	Activator