

Table-1

Gene symbol	Gene name	Renal vs Non-renal		Lupus vs Control	
		Fold- Change (Log2)	q value	Fold-Change (Log2)	q value
OLFM4	olfactomedin 4	1.8	0.16	1.19	0.717
CEACAM6	carcinoembryonic antigen-related cell adhesion molecule 6	1.72	0.16	1.04	0.722
CEACAM8	carcinoembryonic antigen-related cell adhesion molecule 8	1.63	0.172	1.22	0.692
MMP8	matrix metalloproteinase 8	1.6	0.184	1.7	0.417
LTF	lactotransferrin	1.58	0.172	1.04	0.773
DEFA4	defensin, alpha 4	1.46	0.16	0.97	0.661
DEFA3/1	defensin, alpha 3/1	1.43	0.238	1.79	0.475
DAAM2	dishevelled associated activator of morphogenesis 2	1.43	0.16	0.04	0.997
CNTNAP3	contactin associated protein-like 3	1.32	0.155	-1.18	0.188
MS4A3	membrane-spanning 4-domains, subfamily A, member 3	1.27	0.165	0.96	0.657
ARG1	arginase 1	1.25	0.17	0.19	0.989
MPO	myeloperoxidase	1.23	0.16	0.57	0.826
ABCA13	ATP-binding cassette, subfamily A, member 13	1.19	0.16	0.84	0.621
CA1	carbonic anhydrase 1	1.13	0.181	0.12	0.996
IFIT1B	interferon-induced protein with tetratricopeptide repeats 1B	1.12	0.178	0.11	0.996
CRISP3	cysteine-rich secretory protein 3	1.12	0.17	0.61	0.835
LCN2	lipocalin 2	1.1	0.181	0.8	0.724
BPI	bactericidal/permeability increasing protein	1.09	0.191	0.61	0.871
XK	X-linked K gene, Kell blood group	1.08	0.167	-0.02	0.999
CNTNAP3B	contactin associated protein-like 3B	1.05	0.155	-0.92	0.229
ARHGEF12	Rho guanine nucleotide exchange factor 12	1	0.16	0.02	0.999

Table-2

source	target	Interaction
INS	INSR	+
INSR	IRS	+
IGF	INSR	+
INSR	IRS	+
IRS	PI3K	+
PIP3	PDK1	+
PDK1	AKT	+
AKT	TSC1/2	-
TSC1/2	Rheb	-
Rheb	mTORC1	+
mTORC1	HIF1-alpha	+
HIF1-alpha	VEGF	+
mTORC1	S6K1/2	+
S6K1/2	eIF4B	+
S6K1/2	S6	+
mTORC1	4E-BP1	-
4E-BP1	eIF4E1	-
mTORC1	ATG1	-
Rapamycin	mTORC1	-
mTORC1	PKC	+
BRAF	mTORC1	-
Stress	LKB1/STRAND/MO25	+
LKB1/STRAND/MO25	AMPK	+
AMPK	TSC1/2	+
TNF-alpha	IKK	+
IKK	TSC1/2	-
AMP	AMPK	+
Metformin	AMPK	+
AICAR	AMPK	+
Hypoxia	REDD1	+
REDD1	TSC1/2	+
INS	INSR	+
INSR	Ras	+
IGF	INSR	+
INSR	Ras	+

Table-3

source	target	Interaction
IL6	gp130	+
gp130	JAK	+
JAK	STAT3	+
STAT3	ISRE/GAS	+
STAT6	ISRE/GAS	+
ISRE/GAS	Inflammation	+
SHP1	JAK	-
JAK	gp130	+
PIAS	STAT3	-
SUMO	STAT3	-
PTP	STAT3	-
ISRE/GAS	SOCS3	+
SOCS3	JAK	-
INF	JAK	+
JAK	STAT1	+
STAT1	ISRE/GAS	+
STAT3	STAT1	+
STAT6	STAT1	+
TNF	TNFR	+
TNFR	TRADD/TRAF2/5	+
TRADD/TRAF2/5	RIP	+
A20	TRAF6	-
A20	RIP	-
CYLD	RAF2/5	-
CYLD	IKK	-
IL1	IL1R	+
IL1R	IRAK1/4/TRAF2/6	+
IRAK1/4/TRAF2/6	Pellino	+
Pellino	TRAF6	+
TRAF6	TAB2/TAB1/TAK1	+
TAB2/TAB1/TAK1	IKK	+
IKK	NF-KB	+
NF-KB	Inflammation	+
Hypoxia	HIF1-alpha	+
HIF1-alpha	NF-KB	-
HIF1-alpha	Inflammation	+

Table-4

Source	targeting	interaction
M1	T_cell	+
T_cell	T_TfH	+
T_TfH	BCL6_IL21	+
T_cell	IL12_IFN_gamma	+
IL12_IFN_gamma	Th1	+
Th1	IL2_IFN_gamma_TNF_alpha	+
IL2_IFN_gamma_TNF_alpha	Autoimmunity	+
IL2_IFN_gamma_TNF_alpha	Cellular_immunity	+
T_cell	IL6_TGF_beta	+
IL6_TGF_beta	Th17	+
Th17	IL17	+
IL17	Autoimmune_process	+
Th17	Yang	+
GM_CSF	M2	+
M2	T_cell	+
T_cell	IL12_TGF_beta	+
nTreg	IL10_IL35_TGF_beta	+
T_cell	IL2_IL4	+
IL2_IL4	Th2	+
Th2	IL4_IL5_IL13	+
IL4_IL5_IL13	Immuno_complex	+
IL10_IL35_TGF_beta	iTreg	+
iTreg	M1	+
iTreg	IL10_TGF_beta	+
IL10_TGF_beta	immune_regulation	+
IL10_TGF_beta	Yin	+

Table-5

Matching Attribute	name	AverageShortestPathLength	BetweennessCentrality	ClosenessCentrality	ClusteringCoefficient	Degree	Eccentricity	IsSingleNode	NeighborhoodConnectivity	NumberOfDirectedEdges	NumberOfUndirectedEdges	PartnerOfMultiEdgesNodePairs	Radiality	selected	Self_loops	shared name	Stress	TopologicalCoefficient
INF	INF	3.921875	0.13575295	0.25498008	0	3	11	FALSE	9.66666667	3	0	0	0.828125	FALSE	0	INF	6080	0.376812
IL1	IL1	3.8984375	0.16459974	0.25651303	0	4	11	FALSE	7	4	0	0	0.829504	FALSE	0	IL1	6582	0.285714
TNF	TNF	3.9453125	0.12457349	0.25346535	0	3	11	FALSE	8.33333333	3	0	0	0.826746	FALSE	0	TNF	5932	0.385965
IL6	IL6	3.9296875	0.13674336	0.25447316	0	4	11	FALSE	7	4	0	0	0.827665	FALSE	0	IL6	6126	0.285714
Cyclosporin_A	Cyclosporin_A	5.015625	0	0.19937695	0	1	13	FALSE	14	1	0	0	0.763787	FALSE	0	Cyclosporin_A	0	0
T_cell	T_cell	4.0234375	0.50869423	0.24854369	0	14	12	FALSE	2.21428571	14	0	0	0.822151	FALSE	0	T_cell	23114	0.086735
CTX	CTX	5.015625	0	0.19937695	0	1	13	FALSE	14	1	0	0	0.763787	FALSE	0	CTX	0	0
Cortisone	Cortisone	5.609375	0	0.17827298	0	1	12	FALSE	3	1	0	0	0.72886	FALSE	0	Cortisone	0	0
NSAID	NSAID	5.609375	0	0.17827298	0	1	12	FALSE	3	1	0	0	0.72886	FALSE	0	NSAID	0	0
Inflammation	Inflammation	3.65625	0.61479454	0.27350427	0.0277778	9	10	FALSE	5.33333333	9	0	0	0.84375	FALSE	0	Inflammation	25032	0.126543
COX2	COX2	4.6171875	0.03112697	0.21658206	0	3	11	FALSE	3.66666667	3	0	0	0.787224	FALSE	0	COX2	1002	0.333333
CA1	CA1	4.3828125	0.24889272	0.22816399	0	18	11	FALSE	1.44444444	18	0	0	0.801011	FALSE	0	CA1	8262	0.055556
CYCLOTHIAZIDE	CYCLOTHIAZIDE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	CYCLOTHIAZIDE	0	0
ARG1	ARG1	5	0.015625	0.2	0	2	13	FALSE	7.5	2	0	0	0.764706	FALSE	0	ARG1	622	0.5
CHLORAL_BETAIN E	CHLORAL_BETAIN E	5.9921875	0	0.16688396	0	1	14	FALSE	2	1	0	0	0.706342	FALSE	0	CHLORAL_BETAIN E	0	0
MPO	MPO	4.890625	0.03112697	0.20447284	0	3	12	FALSE	2	3	0	0	0.77114	FALSE	0	MPO	586	0.333333
CEFDINIR	CEFDINIR	5.8828125	0	0.16998672	0	1	13	FALSE	3	1	0	0	0.712776	FALSE	0	CEFDINIR	0	0
MMP8	MMP8	4.859375	0.03112697	0.20578778	0	3	12	FALSE	2	3	0	0	0.772978	FALSE	0	MMP8	554	0.333333
DOXYCYCLINE_C ALCIUM	DOXYCYCLINE_C ALCIUM	5.8515625	0	0.17089453	0	1	13	FALSE	3	1	0	0	0.714614	FALSE	0	DOXYCYCLINE_C ALCIUM	0	0
ZONISAMIDE	ZONISAMIDE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	ZONISAMIDE	0	0
BRINZOLAMIDE	BRINZOLAMIDE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	BRINZOLAMIDE	0	0
METHOCARBAMOL	METHOCARBAMOL	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	METHOCARBAMOL	0	0
TOPIRAMATE	TOPIRAMATE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	TOPIRAMATE	0	0
SULPIRIDE	SULPIRIDE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	SULPIRIDE	0	0
DOXYCYCLINE	DOXYCYCLINE	5.8515625	0	0.17089453	0	1	13	FALSE	3	1	0	0	0.714614	FALSE	0	DOXYCYCLINE	0	0
DORZOLAMIDE	DORZOLAMIDE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	DORZOLAMIDE	0	0
CHLORTHALIDONE	CHLORTHALIDONE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	CHLORTHALIDONE	0	0
SODIUM_CARBOONATE	SODIUM_CARBOONATE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	SODIUM_CARBOONATE	0	0
QUINETHAZONE	QUINETHAZONE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	QUINETHAZONE	0	0
METHYCLOTHIAZIDE	METHYCLOTHIAZIDE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	METHYCLOTHIAZIDE	0	0

MELATONIN	MELATONIN	5.8828125	0	0.16998672	0	1	13	FALSE	3	1	0	0	0.712776	FALSE	0	MELATONIN	0	0
HYDROFLUMETHIAZIDE	HYDROFLUMETHIAZIDE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	HYDROFLUMETHIAZIDE	0	0
HYDROCHLOROTHIAZIDE	HYDROCHLOROTHIAZIDE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	HYDROCHLOROTHIAZIDE	0	0
ETHINAMATE	ETHINAMATE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	ETHINAMATE	0	0
DIAZOXIDE	DIAZOXIDE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	DIAZOXIDE	0	0
BENZTHIAZIDE	BENZTHIAZIDE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	BENZTHIAZIDE	0	0
BENDROFLUMETHIAZIDE	BENDROFLUMETHIAZIDE	5.375	0	0.18604651	0	1	12	FALSE	18	1	0	0	0.742647	FALSE	0	BENDROFLUMETHIAZIDE	0	0
Ras	Ras	11.7265625	0	0.08527648	0	2	17	FALSE	4	2	0	1	0.369026	FALSE	0	Ras	0	0
REDD1	REDD1	5.5625	0.00381398	0.17977528	0	2	10	FALSE	3.5	2	0	0	0.731618	FALSE	0	REDD1	114	0.5
Hypoxia	Hypoxia	4.96875	0.01300033	0.20125786	0	2	9	FALSE	3.5	2	0	0	0.766544	FALSE	0	Hypoxia	512	0.5
AICAR	AICAR	7.203125	0	0.13882863	0	1	12	FALSE	5	1	0	0	0.63511	FALSE	0	AICAR	0	0
Metformin	Metformin	7.203125	0	0.13882863	0	1	12	FALSE	5	1	0	0	0.63511	FALSE	0	Metformin	0	0
AMP	AMP	7.203125	0	0.13882863	0	1	12	FALSE	5	1	0	0	0.63511	FALSE	0	AMP	0	0
IKK	IKK	4.7421875	0.25789452	0.21087315	0	5	9	FALSE	2.6	5	0	0	0.779871	FALSE	0	IKK	9404	0.2
TNF-alpha	TNF-alpha	5.734375	0	0.17438692	0	1	10	FALSE	5	1	0	0	0.721507	FALSE	0	TNF-alpha	0	0
AMPK	AMPK	6.2109375	0.07677165	0.16100629	0	5	11	FALSE	2	5	0	0	0.693474	FALSE	0	AMPK	2528	0.2
LKB1/STRAND/MO25	LKB1/STRAND/MO25	7.1875	0.015625	0.13913043	0	2	12	FALSE	3	2	0	0	0.636029	FALSE	0	LKB1/STRAND/MO25	510	0.5
Stress	Stress	8.1796875	0	0.12225406	0	1	13	FALSE	2	1	0	0	0.577665	FALSE	0	Stress	0	0
BRAF	BRAF	5.8203125	0	0.17181208	0	1	10	FALSE	8	1	0	0	0.716452	FALSE	0	BRAF	0	0
PKC	PKC	5.8203125	0	0.17181208	0	1	10	FALSE	8	1	0	0	0.716452	FALSE	0	PKC	0	0
Rapamycin	Rapamycin	5.8203125	0	0.17181208	0	1	10	FALSE	8	1	0	0	0.716452	FALSE	0	Rapamycin	0	0
ATG1	ATG1	5.8203125	0	0.17181208	0	1	10	FALSE	8	1	0	0	0.716452	FALSE	0	ATG1	0	0
eIF4E1	eIF4E1	6.796875	0	0.14712644	0	1	11	FALSE	2	1	0	0	0.659007	FALSE	0	eIF4E1	0	0
4E-BP1	4E-BP1	5.8046875	0.015625	0.17227456	0	2	10	FALSE	4.5	2	0	0	0.717371	FALSE	0	4E-BP1	520	0.5
S6	S6	6.78125	0	0.14746544	0	1	11	FALSE	3	1	0	0	0.659926	FALSE	0	S6	0	0
eIF4B	eIF4B	6.78125	0	0.14746544	0	1	11	FALSE	3	1	0	0	0.659926	FALSE	0	eIF4B	0	0
S6K1/2	S6K1/2	5.7890625	0.03112697	0.17273954	0	3	10	FALSE	3.33333333	3	0	0	0.71829	FALSE	0	S6K1/2	1038	0.333333
VEGF	VEGF	5.234375	0	0.19104478	0	1	11	FALSE	5	1	0	0	0.750919	FALSE	0	VEGF	0	0
HIF1-alpha	HIF1-alpha	4.2421875	0.16662566	0.23572744	0.1	5	10	FALSE	4.6	5	0	0	0.809283	FALSE	0	HIF1-alpha	6340	0.222222
mTORC1	mTORC1	4.828125	0.14815043	0.20711974	0	8	9	FALSE	2	8	0	0	0.774816	FALSE	0	mTORC1	5094	0.125
Rheb	Rheb	5.421875	0.02632874	0.18443804	0	2	10	FALSE	6.5	2	0	0	0.73989	FALSE	0	Rheb	564	0.5
TSC1/2	TSC1/2	5.296875	0.22363025	0.18879056	0	5	10	FALSE	3.2	5	0	0	0.747243	FALSE	0	TSC1/2	7582	0.2
AKT	AKT	6.1640625	0.11811024	0.16223067	0	2	11	FALSE	3.5	2	0	0	0.696232	FALSE	0	AKT	3968	0.5
PDK1	PDK1	7.046875	0.10420768	0.14190687	0	2	12	FALSE	2	2	0	0	0.644301	FALSE	0	PDK1	3486	0.5
PIP3	PIP3	7.9453125	0.09005906	0.12586037	0	2	13	FALSE	2	2	0	0	0.591452	FALSE	0	PIP3	3000	0.5
PI3K	PI3K	8.859375	0.07566437	0.11287478	0	2	14	FALSE	2	2	0	0	0.537684	FALSE	0	PI3K	2510	0.5
IGF	IGF	11.7265625	0	0.08527648	0	2	17	FALSE	4	2	0	1	0.369026	FALSE	0	IGF	0	0
IRS	IRS	9.7890625	0.06102362	0.10215483	0	3	15	FALSE	3	3	0	1	0.482996	FALSE	0	IRS	2016	0.5
INSR	INSR	10.734375	0.04650591	0.09315866	0	8	16	FALSE	1.25	8	0	4	0.42739	FALSE	0	INSR	1524	0.25
INS	INS	11.7265625	0	0.08527648	0	2	17	FALSE	4	2	0	1	0.369026	FALSE	0	INS	0	0
Yin	Yin	7.171875	0.0382628	0.13943355	0	8	16	FALSE	1.875	8	0	0	0.636949	FALSE	0	Yin	1680	0.291667
immune_regulation	immune_regulation	7.3984375	0	0.13516367	0	1	16	FALSE	3	1	0	0	0.623621	FALSE	0	immune_regulation	0	0
IL10_TGF_beta	IL10_TGF_beta	6.40625	0.0601624	0.15609756	0	3	15	FALSE	4	3	0	0	0.681985	FALSE	0	IL10_TGF_beta	2578	0.333333
iTreg	iTreg	5.6328125	0.09830217	0.17753121	0	3	14	FALSE	2.33333333	3	0	0	0.727482	FALSE	0	iTreg	4222	0.333333
Immuno_complex	Immuno_complex	7.8984375	0	0.12660732	0	1	16	FALSE	2	1	0	0	0.59421	FALSE	0	Immuno_complex	0	0
IL4_IL5_IL13	IL4_IL5_IL13	6.90625	0.015625	0.14479638	0	2	15	FALSE	1.5	2	0	0	0.652574	FALSE	0	IL4_IL5_IL13	622	0.5
Th2	Th2	5.9296875	0.03100394	0.16864295	0	2	14	FALSE	2	2	0	0	0.710018	FALSE	0	Th2	1240	0.5
IL2_IL4	IL2_IL4	4.96875	0.04613681	0.20125786	0	2	13	FALSE	8	2	0	0	0.766544	FALSE	0	IL2_IL4	1854	0.5
IL10_IL35_TGF_beta	IL10_IL35_TGF_beta	6.609375	0.015625	0.15130024	0	2	15	FALSE	2	2	0	0	0.670037	FALSE	0	IL10_IL35_TGF_beta	646	0.5
nTreg	nTreg	7.6015625	0	0.1315519	0	1	16	FALSE	2	1	0	0	0.611673	FALSE	0	nTreg	0	0
IL12_TGF_beta	IL12_TGF_beta	5.015625	0	0.19937695	0	1	13	FALSE	14	1	0	0	0.763787	FALSE	0	IL12_TGF_beta	0	0

M2	M2	5	0.015625	0.2	0	2	13	FALSE	7.5	2	0	0	0.764706	FALSE	0	M2	622	0.5
GM_CSF	GM_CSF	5.9921875	0	0.16688396	0	1	14	FALSE	2	1	0	0	0.706342	FALSE	0	GM_CSF	0	0
Yang	Yang	6.34375	0.10346949	0.15763547	0	8	15	FALSE	1.875	8	0	0	0.685662	FALSE	0	Yang	4580	0.291667
Autoimmune_process	Autoimmune_process	7.5	0.015625	0.13333333	0	2	16	FALSE	1.5	2	0	0	0.617647	FALSE	0	Autoimmune_process	662	0.5
IL17	IL17	6.5234375	0.03100394	0.15329341	0	2	15	FALSE	2.5	2	0	0	0.675092	FALSE	0	IL17	1320	0.5
Th17	Th17	5.5625	0.15317421	0.17977528	0	3	14	FALSE	4	3	0	0	0.731618	FALSE	0	Th17	6682	0.333333
IL6_TGF_beta	IL6_TGF_beta	4.8046875	0.16031004	0.20813008	0	2	13	FALSE	8.5	2	0	0	0.776195	FALSE	0	IL6_TGF_beta	7022	0.5
Cellular_immunity	Cellular_immunity	7.8515625	0	0.12736318	0	1	16	FALSE	3	1	0	0	0.596967	FALSE	0	Cellular_immunity	0	0
Autoimmunity	Autoimmunity	7.8515625	0	0.12736318	0	1	16	FALSE	3	1	0	0	0.596967	FALSE	0	Autoimmunity	0	0
IL2_IFN_gamma_TN_F_alpha	IL2_IFN_gamma_TNF_alpha	6.859375	0.03112697	0.14578588	0	3	15	FALSE	1.333333333	3	0	0	0.655331	FALSE	0	IL2_IFN_gamma_TNF_alpha	1242	0.333333
Th1	Th1	5.8984375	0.04613681	0.16953642	0	2	14	FALSE	2.5	2	0	0	0.711857	FALSE	0	Th1	1854	0.5
IL12_IFN_gamma	IL12_IFN_gamma	4.953125	0.06102362	0.20189274	0	2	13	FALSE	8	2	0	0	0.767463	FALSE	0	IL12_IFN_gamma	2464	0.5
BCL6_IL21	BCL6_IL21	5.9921875	0	0.16688396	0	1	14	FALSE	2	1	0	0	0.706342	FALSE	0	BCL6_IL21	0	0
T_TH	T_TH	5	0.015625	0.2	0	2	13	FALSE	7.5	2	0	0	0.764706	FALSE	0	T_TH	622	0.5
M1	M1	4.8515625	0.1074065	0.20611916	0	2	13	FALSE	8.5	2	0	0	0.773438	FALSE	0	M1	4690	0.5
LGP	LGP	8.4921875	0	0.11775529	0	1	17	FALSE	2	1	0	0	0.559283	FALSE	0	LGP	0	0
JWBT	JWBT	7.203125	0.0011565	0.13882863	0	2	16	FALSE	8	2	0	0	0.63511	FALSE	0	JWBT	94	0.7
SJGHDH	SJGHDH	7.203125	0.0011565	0.13882863	0	2	16	FALSE	8	2	0	0	0.63511	FALSE	0	SJGHDH	94	0.7
DHY	DHY	7.203125	0.0011565	0.13882863	0	2	16	FALSE	8	2	0	0	0.63511	FALSE	0	DHY	94	0.7
DBW	DBW	7.203125	0.0011565	0.13882863	0	2	16	FALSE	8	2	0	0	0.63511	FALSE	0	DBW	94	0.7
SJDH	SJDH	7.203125	0.0011565	0.13882863	0	2	16	FALSE	8	2	0	0	0.63511	FALSE	0	SJDH	94	0.7
JJDH	JJDH	8.1640625	0	0.12248804	0	1	17	FALSE	8	1	0	0	0.578585	FALSE	0	JJDH	0	0
GZDH	GZDH	8.1640625	0	0.12248804	0	1	17	FALSE	8	1	0	0	0.578585	FALSE	0	GZDH	0	0
WZXZ	WZXZ	7.3359375	0	0.13631523	0	1	16	FALSE	8	1	0	0	0.627298	FALSE	0	WZXZ	0	0
JSW	JSW	7.3359375	0	0.13631523	0	1	16	FALSE	8	1	0	0	0.627298	FALSE	0	JSW	0	0
NF-KB	NF-KB	4.1640625	0.23849656	0.24015009	0.33333333	3	9	FALSE	6.333333333	3	0	0	0.813879	FALSE	0	NF-KB	9242	0.375
TAB2/TAB1/TAK1	TAB2/TAB1/TAK1	5.6328125	0.02620571	0.17753121	0	2	10	FALSE	4	2	0	0	0.727482	FALSE	0	TAB2/TAB1/TAK1	566	0.5
Pellino	Pellino	6.1171875	0.00971949	0.16347382	0	2	11	FALSE	2.5	2	0	0	0.698989	FALSE	0	Pellino	160	0.5
IRAK1/4/TRAF2/6	IRAK1/4/TRAF2/6	5.5625	0.01755249	0.17977528	0	2	12	FALSE	2	2	0	0	0.731618	FALSE	0	IRAK1/4/TRAF2/6	320	0.5
IL1R	IL1R	4.8125	0.02924049	0.20779221	0	2	12	FALSE	3	2	0	0	0.775735	FALSE	0	IL1R	532	0.5
RAF2/5	RAF2/5	6.7109375	0	0.14901048	0	1	11	FALSE	2	1	0	0	0.664063	FALSE	0	RAF2/5	0	0
CYLD	CYLD	5.71875	0.015625	0.17486339	0	2	10	FALSE	3	2	0	0	0.722426	FALSE	0	CYLD	524	0.5
TRAF6	TRAF6	6.1640625	0.01943898	0.16223067	0	3	10	FALSE	2	3	0	0	0.696232	FALSE	0	TRAF6	434	0.333333
A20	A20	6.7734375	0.0054749	0.14763552	0	2	11	FALSE	2.5	2	0	0	0.660386	FALSE	0	A20	112	0.5
RIP	RIP	6.3515625	0.01000656	0.15744157	0	2	12	FALSE	2	2	0	0	0.685202	FALSE	0	RIP	236	0.5
TRADD/TRAF2/5	TRADD/TRAF2/5	5.7734375	0.02027969	0.17320704	0	2	13	FALSE	2	2	0	0	0.71921	FALSE	0	TRADD/TRAF2/5	408	0.5
TNFR	TNFR	4.8671875	0.03338255	0.20545746	0	2	12	FALSE	2.5	2	0	0	0.772518	FALSE	0	TNFR	666	0.5
STAT1	STAT1	5.1015625	0.00179831	0.19601838	0.5	4	12	FALSE	4.75	4	0	0	0.758732	FALSE	0	STAT1	104	0.395833
SOCS3	SOCS3	5.140625	1.13E-04	0.19452888	0	2	12	FALSE	5.5	2	0	0	0.756434	FALSE	0	SOCS3	6	0.642857
PTP	PTP	6.078125	0	0.16452442	0	1	13	FALSE	6	1	0	0	0.701287	FALSE	0	PTP	0	0
SUMO	SUMO	6.078125	0	0.16452442	0	1	13	FALSE	6	1	0	0	0.701287	FALSE	0	SUMO	0	0
PIAS	PIAS	6.078125	0	0.16452442	0	1	13	FALSE	6	1	0	0	0.701287	FALSE	0	PIAS	0	0
SHP1	SHP1	5.7265625	0	0.17462483	0	1	13	FALSE	6	1	0	0	0.721967	FALSE	0	SHP1	0	0
STAT6	STAT6	5.484375	0	0.18233618	1	2	12	FALSE	4.5	2	0	0	0.736213	FALSE	0	STAT6	0	0.75
ISRE/GAS	ISRE/GAS	4.5234375	0.06875	0.22107081	0.2	5	11	FALSE	4.6	5	0	0	0.792739	FALSE	0	ISRE/GAS	1428	0.28
STAT3	STAT3	5.0859375	0.04661868	0.19662058	0.13333333	6	12	FALSE	3	6	0	0	0.759651	FALSE	0	STAT3	804	0.277778
JAK	JAK	4.734375	0.05055979	0.21122112	0.06666667	7	12	FALSE	3	7	0	1	0.780331	FALSE	0	JAK	952	0.233333
gp130	gp130	4.78125	0.00246063	0.20915033	0	3	12	FALSE	5	3	0	1	0.777574	FALSE	0	gp130	64	0.5

Table-6

Source	Target	Interaction
INS	INSR	+
INSR	IRS	+
IGF	INSR	+
INSR	IRS	+
IRS	PI3K	+
PI3K	PIP3	+
PIP3	PDK1	+
PDK1	AKT	+
AKT	TSC1/2	-
TSC1/2	Rheb	-
Rheb	mTORC1	+
mTORC1	HIF1-alpha	+
HIF1-alpha	VEGF	+
mTORC1	S6K1/2	+
S6K1/2	eIF4B	+
S6K1/2	S6	+
mTORC1	4E-BP1	-
4E-BP1	eIF4E1	-
mTORC1	ATG1	-
Rapamycin	mTORC1	-
mTORC1	PKC	+
BRAF	mTORC1	-
Stress	LKB1/STRAND/MO25	+
LKB1/STRAND/MO25	AMPK	+
AMPK	TSC1/2	+
TNF-alpha	IKK	+
IKK	TSC1/2	-
AMP	AMPK	+
Metformin	AMPK	+
AICAR	AMPK	+
Hypoxia	REDD1	+
REDD1	TSC1/2	+
INS	INSR	+
INSR	Ras	+
IGF	INSR	+
INSR	Ras	+
DOXYCYCLINE_CALCIIUM	MMP8	-
BENDROFLUMETHIAZIDE	CA1	-
BENZTHIAZIDE	CA1	-
CEFDINIR	MPO	-
CYCLOTHIAZIDE	CA1	-
DIAZOXIDE	CA1	-
ETHINAMATE	CA1	-
HYDROCHLOROTHIAZIDE	CA1	-
HYDROFLUMETHIAZIDE	CA1	-
MELATONIN	MPO	-

METHYCLOTHIAZIDE	CA1	-
QUINETHAZONE	CA1	-
SODIUM_CARBONATE	CA1	-
CHLORTHALIDONE	CA1	-
DORZOLAMIDE	CA1	-
DOXYCYCLINE	MMP8	-
SULPIRIDE	CA1	-
TOPIRAMATE	CA1	-
METHOCARBAMOL	CA1	-
BRINZOLAMIDE	CA1	-
CHLORAL_BETAINE	ARG1	-
ZONISAMIDE	CA1	-
DOXYCYCLINE_CALCIIUM	MMP8	-
IL1	MMP8	+
CEFDINIR	MPO	-
IL6	MPO	+
CHLORAL_BETAINE	ARG1	-
T_cell	ARG1	-
CYCLOTHIAZIDE	CA1	-
CA1	Inflammation	+
IL6	gp130	+
gp130	JAK	+
JAK	STAT3	+
STAT3	ISRE/GAS	+
STAT6	ISRE/GAS	+
ISRE/GAS	Inflammation	+
SHPI	JAK	-
JAK	gp130	+
PIAS	STAT3	-
SUMO	STAT3	-
PTP	STAT3	-
ISRE/GAS	SOCS3	+
SOCS3	JAK	-
INF	JAK	+
JAK	STAT1	+
STAT1	ISRE/GAS	+
STAT3	STAT1	+
STAT6	STAT1	+
TNF	TNFR	+
TNFR	TRADD/TRAF2/5	+
TRADD/TRAF2/5	RIP	+
A20	TRAF6	-
A20	RIP	-
CYLD	RAF2/5	-
CYLD	IKK	-
IL1	IL1R	+
IL1R	IRAK1/4/TRAF2/6	+
IRAK1/4/TRAF2/6	Pellino	+

Pellino	TRAF6	+
TRAF6	TAB2/TAB1/TAK1	+
TAB2/TAB1/TAK1	IKK	+
IKK	NF-KB	+
NF-KB	Inflammation	+
Hypoxia	HIF1-alpha	+
HIF1-alpha	NF-KB	-
HIF1-alpha	Inflammation	+
COX2	Inflammation	+
NSAID	COX2	-
Cortisone	COX2	-
CTX	T_cell	-
Cyclosporin_A	T_cell	-
T_cell	IL6	+
T_cell	TNF	+
T_cell	IL1	+
T_cell	INF	+
IL6	Inflammation	+
TNF	Inflammation	+
IL1	Inflammation	+
INF	Inflammation	+
M1	T_cell	+
T_cell	T_TFH	+
T_TFH	BCL6_IL21	+
T_cell	IL12_IFN_gamma	+
IL12_IFN_gamma	Th1	+
Th1	IL2_IFN_gamma_TNF_alpha	+
IL2_IFN_gamma_TNF_alpha	Autoimmunity	+
IL2_IFN_gamma_TNF_alpha	Cellular_immunity	+
T_cell	IL6_TGF_beta	+
IL6_TGF_beta	Th17	+
Th17	IL17	+
IL17	Autoimmune_process	+
Th17	Yang	+
GM_CSF	M2	+
M2	T_cell	+
T_cell	IL12_TGF_beta	+
nTreg	IL10_IL35_TGF_beta	+
T_cell	IL2_IL4	+
IL2_IL4	Th2	+
Th2	IL4_IL5_IL13	+
IL4_IL5_IL13	Immuno_complex	+
IL10_IL35_TGF_beta	iTreg	+
iTreg	M1	+
iTreg	IL10_TGF_beta	+
IL10_TGF_beta	immune_regulation	+
IL10_TGF_beta	Yin	+
JSW	Yang	+

WZXZ	Yang	+
GZDH	Yin	+
JJDH	Yin	+
SJDH	Yang	+
DBW	Yang	+
DHY	Yang	+
SJGHDH	Yang	+
SJDH	Yin	+
DBW	Yin	+
DHY	Yin	+
SJGHDH	Yin	+
JWBT	Yang	-
JWBT	Yin	-
LGP	Autoimmune_process	-