

Supplementary Table 2. Members of the MODS-associated Module 2 network (please refer to Figure 3 in main manuscript).

Symbol	Gene Name	Location	Pharmacologic agents targeting network node
AKT1	v-akt murine thymoma viral oncogene homolog 1	Cytoplasm	enzastaurin
AKT2	v-akt murine thymoma viral oncogene homolog 2	Cytoplasm	enzastaurin
BCL2L1	BCL2-like 1	Cytoplasm	
BCR	breakpoint cluster region	Cytoplasm	imatinib
CBL	Cbl proto-oncogene, E3 ubiquitin protein ligase	Nucleus	
CBLB	Cbl proto-oncogene, E3 ubiquitin protein ligase B	Nucleus	
CBLC	Cbl proto-oncogene, E3 ubiquitin protein ligase C	Nucleus	
CCND1	cyclin D1	Nucleus	
CCND2	cyclin D2	Nucleus	
CEBPB	CCAAT/enhancer binding protein (C/EBP), beta	Nucleus	
CISH	cytokine inducible SH2-containing protein	Cytoplasm	
CLCF1	cardiotrophin-like cytokine factor 1	Extracellular Space	
CNTF	ciliary neurotrophic factor	Extracellular Space	
CNTFR	ciliary neurotrophic factor receptor	Plasma Membrane	
CREBBP	CREB binding protein	Nucleus	
CRKL	v-crk sarcoma virus CT10 oncogene homolog (avian)-like	Cytoplasm	
CRLF2	cytokine receptor-like factor 2	Plasma Membrane	
CSF2	colony stimulating factor 2 (granulocyte-macrophage)	Extracellular Space	
CSF2RA	colony stimulating factor 2 receptor, alpha, low-affinity	Plasma Membrane	sargramostim, mavrilimumab
CSF2RB	colony stimulating factor 2 receptor, beta, low-affinity	Plasma Membrane	sargramostim
CSF3	colony stimulating factor 3 (granulocyte)	Extracellular Space	
CSF3R	colony stimulating factor 3 receptor (granulocyte)	Plasma Membrane	pegfilgrastim, filgrastim
CSNK2A1	casein kinase 2, alpha 1 polypeptide	Cytoplasm	
EGF	epidermal growth factor	Extracellular Space	
EGFR	epidermal growth factor receptor	Plasma Membrane	cetuximab, AEE788, panitumumab, BMS-599626, ARRY-334543, XL647, caneritinib, gefitinib, HKI-272, PD153035, lapatinib, vandetanib, erlotinib
ELK1	ELK1, member of ETS oncogene family	Nucleus	
EP300	E1A binding protein p300	Nucleus	
FOS	FBJ murine osteosarcoma viral oncogene homolog	Nucleus	
GRB2	growth factor receptor-bound protein 2	Cytoplasm	
IFNAR1	interferon (alpha, beta and omega) receptor 1	Plasma Membrane	interferon alfacon-1, PEG-interferon alfa-2a, interferon beta-1a, IFNA2, interferon alfa-2b/ribavirin, pegintron, interferon beta-1b
IFNAR2	interferon (alpha, beta and omega) receptor 2	Plasma Membrane	interferon alfacon-1, PEG-interferon alfa-2a, interferon beta-1a, IFNA2, interferon alfa-2b/ribavirin, pegintron, interferon beta-1b
IFNG	interferon, gamma	Extracellular Space	
IFNGR1	interferon gamma receptor 1	Plasma Membrane	interferon gamma-1b
IFNGR2	interferon gamma receptor 2 (interferon gamma transducer 1)	Plasma Membrane	interferon gamma-1b
IL10	interleukin 10	Extracellular Space	
IL10RA	interleukin 10 receptor, alpha	Plasma Membrane	
IL10RB	interleukin 10 receptor, beta	Plasma Membrane	
IL11	interleukin 11	Extracellular Space	
IL12B	interleukin 12B	Extracellular Space	ustekinumab
IL12RB1	interleukin 12 receptor, beta 1	Plasma Membrane	
IL13RA1	interleukin 13 receptor, alpha 1	Plasma Membrane	cintridekin besudotox
IL13RA2	interleukin 13 receptor, alpha 2	Plasma Membrane	cintridekin besudotox
IL15	interleukin 15	Extracellular Space	
IL15RA	interleukin 15 receptor, alpha	Plasma Membrane	
IL21R	interleukin 21 receptor	Plasma Membrane	
IL22	interleukin 22	Extracellular Space	
IL23A	interleukin 23, alpha subunit p19	Extracellular Space	
IL24	interleukin 24	Extracellular Space	
IL2RA	interleukin 2 receptor, alpha	Plasma Membrane	LMB-2, dactilimumab, basiliximab, aldesleukin, denileukin diftitox
IL2RB	interleukin 2 receptor, beta	Plasma Membrane	monoclonal antibody M1k-Beta-1, aldesleukin, denileukin diftitox
IL2RG	interleukin 2 receptor, gamma	Plasma Membrane	aldesleukin, denileukin diftitox
IL3RA	interleukin 3 receptor, alpha (low affinity)	Plasma Membrane	
IL6	interleukin 6 (interferon, beta 2)	Extracellular Space	tocilizumab
IL6ST	interleukin 6 signal transducer (gp130, oncostatin M receptor)	Plasma Membrane	
IL7R	interleukin 7 receptor	Plasma Membrane	recombinant human interleukin-7
INPP5D	inositol polyphosphate-5-phosphatase, 145kDa	Cytoplasm	
IRF9	interferon regulatory factor 9	Nucleus	
JAK1	Janus kinase 1	Cytoplasm	ruxolitinib
JAK2	Janus kinase 2	Cytoplasm	ruxolitinib
JAK3	Janus kinase 3	Cytoplasm	
JUN	jun proto-oncogene	Nucleus	
LCK	lymphocyte-specific protein tyrosine kinase	Cytoplasm	dasatinib, pazopanib
LEPR	leptin receptor	Plasma Membrane	
LIF	leukemia inhibitory factor	Extracellular Space	
MAP2K1	mitogen-activated protein kinase kinase 1	Cytoplasm	PD 0325901
MAP2K4	mitogen-activated protein kinase kinase 4	Cytoplasm	
MAP3K1	mitogen-activated protein kinase kinase kinase 1	Cytoplasm	
MAPK8	mitogen-activated protein kinase 8	Cytoplasm	aplidine
MYC	v-myc myelocytomatosis viral oncogene homolog (avian)	Nucleus	
OSM	oncostatin M	Extracellular Space	
OSMR	oncostatin M receptor	Plasma Membrane	
PDGFA	platelet-derived growth factor alpha polypeptide	Extracellular Space	
PDGFRA	platelet-derived growth factor receptor, alpha polypeptide	Plasma Membrane	sunitinib, pazopanib, axitinib, telatinib, imatinib, becaperlin
PIAS4	protein inhibitor of activated STAT, 4	Nucleus	
PIK3CA	phosphoinositide-3-kinase, catalytic, alpha polypeptide	Cytoplasm	SF 1126, PX-866, NVP-BEZ235, BKM120, XL147,
PIK3CB	phosphoinositide-3-kinase, catalytic, beta polypeptide	Cytoplasm	SF 1126, PX-866, NVP-BEZ235, BKM120, XL147,
PIK3CD	phosphoinositide-3-kinase, catalytic, delta polypeptide	Cytoplasm	SF 1126, PX-866, NVP-BEZ235, BKM120, XL147, CAL-101
PIK3CG	phosphoinositide-3-kinase, catalytic, gamma polypeptide	Cytoplasm	SF 1126, PX-866, NVP-BEZ235, BKM120, XL147,
PIK3R1	phosphoinositide-3-kinase, regulatory subunit 1 (alpha)	Cytoplasm	
PIK3R5	phosphoinositide-3-kinase, regulatory subunit 5	Cytoplasm	
PIM1	pim-1 oncogene	Cytoplasm	
PLCG1	phospholipase C, gamma 1	Cytoplasm	
PPP1R13B	protein phosphatase 1, regulatory subunit 13B	Cytoplasm	
PRKCA	protein kinase C, alpha	Cytoplasm	L-threo-safingol, ingenol 3-angelate
PRLR	prolactin receptor	Plasma Membrane	
PTPN11	protein tyrosine phosphatase, non-receptor type 11	Cytoplasm	
PTPN6	protein tyrosine phosphatase, non-receptor type 6	Cytoplasm	
RAF1	v-raf-1 murine leukemia viral oncogene homolog 1	Cytoplasm	CHIR-265, vemurafenib, sorafenib
RASA1	RAS p21 protein activator (GTPase activating protein) 1	Cytoplasm	
RPS6KB1	ribosomal protein S6 kinase, 70kDa, polypeptide 1	Cytoplasm	
SHC1	SHC (Src homology 2 domain containing) transforming protein 1	Cytoplasm	
SOCS1	suppressor of cytokine signaling 1	Cytoplasm	
SOCS3	suppressor of cytokine signaling 3	Cytoplasm	
SOCS4	suppressor of cytokine signaling 4	Cytoplasm	
SOCS5	suppressor of cytokine signaling 5	Extracellular Space	
SOCS7	suppressor of cytokine signaling 7	Cytoplasm	
SOS1	son of sevenless homolog 1 (Drosophila)	Cytoplasm	
SOS2	son of sevenless homolog 2 (Drosophila)	Cytoplasm	
SPRED1	sprouty-related, EVH1 domain containing 1	Plasma Membrane	
SPRED2	sprouty-related, EVH1 domain containing 2	Extracellular Space	
SPRY2	sprouty homolog 2 (Drosophila)	Plasma Membrane	
SPRY4	sprouty homolog 4 (Drosophila)	Plasma Membrane	

SRC	v-src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog	Cytoplasm	dasatinib, AZM-475271, saracatinib
SRF	serum response factor	Nucleus	
STAM	signal transducing adaptor molecule 1	Cytoplasm	
STAM2	signal transducing adaptor molecule 2	Cytoplasm	
STAT1	signal transducer and activator of transcription 1, 91kDa	Nucleus	
STAT2	signal transducer and activator of transcription 2, 113kDa	Nucleus	
STAT3	signal transducer and activator of transcription 3	Nucleus	
STAT4	signal transducer and activator of transcription 4	Nucleus	
STAT5A	signal transducer and activator of transcription 5A	Nucleus	
STAT5B	signal transducer and activator of transcription 5B	Nucleus	
THPO	thrombopoietin	Extracellular Space	