

KEY RESOURCES TABLE

REAGENT or RESOURCE	SOURCE	IDENTIFIER
Antibodies		
Recombinant Anti-CD8 alpha antibody	Abcam	Cat#ab209775
Anti-CD8 alpha antibody	Abcam	Cat #ab4055, RRID:AB_2860566
Recombinant Anti-CD4 antibody	Abcam	Cat #ab133616, RRID:AB_2750883
Rabbit anti-CD68	Abcam	Cat#ab213363, RRID:AB_2801637
Rabbit anti-YAP1	Elabscience	Cat# E-AB-62344, RRID:AB_2893039
Rabbit anti-RhoA (67B9)	Cell Signaling Technology	Cat#2117 RRID:AB_10693922
Rabbit anti-Cdc42 Antibody	Cell Signaling Technology	Cat#2462 RRID:AB_2078085
Rabbit anti-RAC1 Polyclonal Antibody	Thermo Fisher Scientific	Cat# PA1-091 RRID:AB_2539856
Rabbit polyclonal anti-TAZ	Abcam	Cat#ab84927, RRID: AB1925489
Rabbit anti-Lamin B1	proteintech	Cat# 12987-1-AP, RRID:AB_2136290
Rabbit anti-MST1	Cell Signaling Technology	Cat# 3682, RRID:AB_2144632
Mouse anti-PAX8	Santa Cruz Biotechnology	Cat# sc-81353, RRID:AB_1127048
Rabbit anti-PAX8	proteintech	Cat#10336-1-AP, RRID:AB_2236705
Mouse anti-CD16 (2Q1240)	Santa Cruz Biotechnology	Cat# sc-70548, RRID:AB_1120245
Mouse anti-Integrin α X (B-6)	Santa Cruz Biotechnology	Cat# sc-46676, RRID:AB_626859
Recombinant anti-NCAM1	Abcam	Cat# ab75813, RRID:AB_2632384
Mouse anti-B7-2 (BU63)	Santa Cruz Biotechnology	Cat# sc-19617, RRID:AB_627201
Mouse anti-CD163 (GHI/61)	Santa Cruz Biotechnology	Cat# sc-20066, RRID:AB_626933
Mouse anti-CD206 (D1)	Santa Cruz Biotechnology	Cat# sc-376108, RRID:AB_10987732
Mouse anti- beta Actin	ThermoFisher Scientific	Cat# MA5-15739, RRID:AB_10979409

Mouse anti-Tublin	Sigma	Cat# T5168, RRID:AB_477579
CD206-PE	BD Biosciences	Cat#555954, RRID:AB_396250
CD86-PE	BD Biosciences	Cat# 562390, RRID:AB_11154047
CD68-FITC	BF Pharmingen	Cat# 562117, RRID:AB_10896283
CD86-FITC	eBioscience	Cat # 11-0862-82, RRID:AB_465148
CD86-APC	Biolegend	Cat # 305412 RRID:AB_493231
CD45- Alexa Fluor 700	Invitrogen™	Cat # MHCD4529, RRID:AB_10373857
CD3- Brilliant Violet 711	Biolegend	Cat#300464, RRID:AB_2566036
CD56- Brilliant Violet 711	Biolegend	Cat#318336, RRID:AB_2562417
CD19- Brilliant Violet 711	Biolegend	Cat#302246, RRID:AB_2562065
CD14-Brilliant Violet 421™	Biolegend	Cat#301830, RRID:AB_10959324
CD11b-Brilliant Violet 605™	Biolegend	Cat#301332, RRID:AB_2562021
CD163- APC/Fire™ 750	Biolegend	Cat#333634, RRID:AB_2734333
Mo-F4/80-APC	eBioscience	Cat# 14-4801-82, RRID:AB_467558
Mo-CD86-FITC	eBioscience	Cat # 11-0862-82, RRID:AB_465148
Mo-CD206-PE-eFluor 610	eBioscience	Cat # 61-2061-82, RRID:AB_2802389
anti-MHCII (M5/114)	eBioscience	Cat # 14-5321-82, RRID:AB_467561
Bacterial and virus strains		
LV-CMV-RLuc-IRES-GFP	Capital Biosciences	
Biological samples		
Buffy coat	Hong Kong Red Cross	NA
Ascites from ovarian cancer patients	Queen Mary Hospital (Hong Kong)	HKU/HA HKW IRB) (Institutional Review Board number: UW 20-256)

Ovarian tumor tissues and omentum tissues	Queen Mary Hospital (Hong Kong)	HKU/HA HKW IRB) (Institutional Review Board number: UW UW11-298)
Chemicals, peptides, and recombinant proteins		
Recombinant Human M-CSF	LPEPROTECH	Cat#300-25
LPS	Enzo Life Sciences	Cat# 03271825
Recombinant Human IFN- γ	PEPROTECH	Cat# 300-02
Recombinant Human IL-13	PEPROTECH	Cat# 200-13
Recombinant Human IL-4	PEPROTECH	Cat# 200-04
Phorbol 12-myristate 13-acetate	Abcam	Cat# ab120297
Liberase enzyme TL	Roche	Cat#5401020001
Liberase enzyme DL	Roche	Cat#5401160001
Dnase 1	Sigma Aldrich	Cat#11284932001
XMU-MP-1	MOLNOVA	Cat# M13204
Oleic acid	Sigma Aldrich	Cat# O1008
Methyl arachidonate	Sigma Aldrich	Cat# A9298
Linoleic acid	Sigma Aldrich	Cat# L1376
Recombinant mouse M-CSF	PEPROTECH	Cat# 315-02
Recombinant mouse IFN- γ	PEPROTECH	Cat# 315-05
Lipopolysaccharides from Escherichia coli O55:B5,	Sigma Aldrich	Cat# L2880-25MG
Recombinant mouse IL13	PEPROTECH	Cat# 210-13
Recombinant mouse IL4	PEPROTECH	Cat# 214-14
Critical commercial assays		
Cellular ROS Assay Kit	Abcam	Cat# ab113851
Nile Red	Invitrogen	Cat# N1142
Opal 7-Color IHC Kits	AKOYA BIOSCIENCES	Cat# NEL811001KT
Opal Polaris 480 Reagent	AKOYA BIOSCIENCES	Cat# FP1500001KT
Macrophage Isolation Kit (Peritoneum)	Miltenyi Biotec	Cat# 130-110-434
human CD14 Microbeads	Miltenyi Biotec	Cat# 130-050-201
Density gradient medium for the isolation of mononuclear cells	Lymphoprep™	Cat# 07851
ImmunoCult™-SF Macrophage Medium	STEMCELL	Cat# 10961
G-LISA RhoA Activation Assay	Cytoskeleton, Inc.	Cat# BK124-S
Active Rho Pull-Down and Detection Kit	ThermoFisher Scientific	Cat# 16116
Seahorse XF Cell Mito Stress Test Kit	Agilent Technologies	Cat# 103015-100
NE-PER™ Nuclear and Cytoplasmic Extraction Reagents	Thermo Scientific	Cat# 78833

HiPerFect Transfection Reagent	QIAGEN	Cat# 301704
FuGene HD Transfection Reagent	Promega	Cat# E2311
Cell Proliferation Kit II (XTT)	Roche	Cat# 11465015001
Deposited data		
RNA-seq data	This paper	GSE175552
Experimental models: cell lines		
THP-1	CLS	RRID:CVCL_0006
U937	CLS	RRID:CVCL_0007
ID8	Dr. Katherine F. Roby, The University of Kansas, USA	RRID:CVCL_IU14
OVKATE	JCRB	RRID:CVCL_3110
OVSAHO	JCRB	RRID:CVCL_3114
ES2	ATCC	RRID:CVCL_3509
A2780CP	Professor Benjamin K Tsang(Department of Obstetrics and Gynaecology, The University of Ottawa,Canada)	RRID:CVCL_A5PT
Experimental models: organisms/strains		
Mouse: YAP fl/fl	The Jackson Laboratory	JAX:027929
Mouse: Lysm ^{cre/cre}	The Jackson Laboratory	JAX: 004781
Oligonucleotides		
qRT-PCR taqman probes, see Table S1	ThermoFisher Scientific	Table S1
YAP1 Human siRNA Oligo Duplex	ORIGENE	Cat# SR323110
RHOA Human siRNA Oligo Duplex	ORIGENE	Cat# SR319384
Recombinant DNA		
Software and algorithms		
Prism	Graphpad	https://www.graphpad.com/
FlowJo	Flowjo	https://www.flowjo.com/
Phenochart 1.0.9	PerkinElmer	https://www.perkinelmer.com.cn
Image Studio Lite Ver 5.2	LI-COR	https://www.licor.com

InForm 2.4.2	PerkinElmer	https://www.perkinelmer.com.cn/
Image J	NIH	https://imagej.nih.gov/ij/
Living Image Software [IVIS Spectrum Series]	PerkinElmer	https://www.perkinelmer.com.cn/
Seahorse Wave Desktop Software (Version 2.2)	Agilent Technologies	https://www.agilent.com/
ZEISS ZEN Microscope Software	ZEISS	https://www.zeiss.com/microscopy/int/products/microscope-software/zen.html
NDP.view 2	HAMAMATSU	https://www.hamamatsu.com/jp/en/product/life-science-and-medical-systems/digital-slide-scanner/U12388-01.html
Other		
Cleanascite™ Lipid Removal Reagent	Biotech Support Group, Monmouth Junction, NJ, USA	Cat# X2555-50
ACK Lysing Buffer	Gibco	Cat# 2187329
D-Luciferin, Potassium Salt (Proven and Published™)	Gold Biotechnology	Cat#LUCK-1G

Table S1. qRT-PCR Taqman assays, Related to STAR Methods

Gene Symbol	Assay ID
CD163	Hs00174705_m1
IL10	Hs00961622_m1
NOS2	Hs01075529_m1
TGFβ1	Hs00998133_m1
CCL2	Hs00234140_m1
TNF	Hs00174128_m1
Mst1	Hs00360684_m1
Yap1	Hs05045510_s1
Arg1	Mm00475988_m1
Fizz1	Mm00445109_m1
Ym1	Mm00657889_mH
18s	Hs03003631_g1
GAPDH	Mm99999915_g1