

REAGENT	SOURCE	IDENTIFIER
Antibodies		
Fixable Viability Stain 780	BD Pharmingen	Cat# 565388
Human TruStain FcX™	Biolegend	Cat# 422302
Brilliant Violet 510™ anti-human CD45 Antibody	Biolegend	Cat# 304036
APC anti-human CD46 Antibody	Biolegend	Cat# 368511
FITC anti-human CD68 Antibody	Biolegend	Cat# 333806
FITC anti-human CD8 Antibody	Biolegend	Cat# 301050
PerCP/Cyanine5.5 anti-human CD68 Antibody	Biolegend	Cat# 333813
Brilliant Violet 421™ anti-human LAP (TGF-β1) Antibody	Biolegend	Cat# 141407
Brilliant Violet 421™ anti-human CD163 Antibody	Biolegend	Cat# 333612
Brilliant Violet 421™ anti-human IL-10 Antibody	Biolegend	Cat# 501422
PerCP/Cyanine5.5 anti-human CX3CR1 Antibody	Biolegend	Cat# 341614
PE/Cyanine7 anti-human HLA-DR Antibody	Elabscience®	Cat# 327018
Anti-Human Complement Component C1q, PE	Cedarlane	Cat# CL7611PE
Human/Mouse TREM2 APC-conjugated Antibody	R & D Systems	Cat# FAB17291A
PE/Cyanine7 anti-human CD279 (PD-1) Antibody	Biolegend	Cat# 329918
Brilliant Violet 605™ anti-human CD274 (B7-H1, PD-L1) Antibody	Biolegend	Cat# 329724
PerCP/Cyanine5.5 anti-human CD206 (MMR) Antibody	Biolegend	Cat# 321122
APC anti-human CD366 (Tim-3) Antibody	Biolegend	Cat# 345012
APC anti-human CD172a (SIRPα) Antibody	Biolegend	Cat# 372106
PE/Cyanine7 anti-human TNF-α Antibody	Biolegend	Cat# 502929
PE anti-Human IFN-γ Antibody	Biolegend	Cat# 506507
Brilliant Violet 510™ anti-human Perforin Antibody	Biolegend	Cat# 308119
Brilliant Violet 421™ anti-human Granzyme B Antibody	Biolegend	Cat# 396414
Brilliant Violet 421™ anti-human TIGIT(VSTM3) Antibody	Biolegend	Cat# 372709
FITC anti-human CD14 Antibody	Biolegend	Cat# 325603
Brilliant Violet 421™ anti-human CSF1R Antibody	Biolegend	Cat# 565347

Human MS4A4A Alexa Fluor® 488-conjugated Antibody	R & D Systems	Cat#FAB7797G
CFSE	BD Pharmingen	Cat#565082
TruStain FcX (anti-mouse CD16/32)	Biolegend	Cat#101320
Brilliant Violet 510™ anti-mouse CD45 Antibody	Biolegend	Cat#103138
PerCP/Cyanine5.5 anti-mouse/human CD11b Antibody	Biolegend	Cat#101228
PE anti-mouse F4/80 Antibody	Biolegend	Cat#123110
PE/Cyanine7 anti-mouse CX3CR1 Antibody	Biolegend	Cat# 149015
Brilliant Violet 421™ anti-mouse CD279 (PD-1) Antibody	Biolegend	Cat# 109121
PE/Cyanine7 anti-mouse CD279 (PD-1) Antibody	Biolegend	Cat# 109110;
PE/Dazzle™ 594 anti-mouse CD172a Antibody	Biolegend	Cat#144016
Brilliant Violet 605™ anti-mouse CD274 (B7-H1, PD-L1) Antibody	Biolegend	Cat#124321
Anti-Mouse Complement Component C1q, FITC	Cedarlane	Cat#CL7501F
APC anti-mouse CD206 (MMR) Antibody	Biolegend	Cat#141708
Brilliant Violet 421™ anti-mouse I-A/I-E Antibody	Biolegend	Cat#107632
anti-mouse IL-10 Antibody	Biolegend	Cat# 505021
Brilliant Violet 421™ anti-mouse LAP (TGF-β1) Antibody	Biolegend	Cat#141407
APC anti-mouse CD366 (Tim-3) Antibody	Biolegend	Cat#119706
PerCP/Cyanine5.5 anti-mouse CD3ε Antibody	Biolegend	Cat#100328
FITC anti-mouse CD4 Antibody	Biolegend	Cat#100510
Brilliant Violet 605™ anti-mouse CD8a Antibody	Biolegend	Cat#100743
Brilliant Violet 421™ anti-human FOXP3 Antibody	Biolegend	Cat# 320124
PE/Cyanine7 anti-mouse IFN-γ Antibody	Biolegend	Cat#505826
PE anti-mouse Granzyme B Antibody	Biolegend	Cat#372208
APC anti-mouse Perforin Antibody	Biolegend	Cat#154404
Brilliant Violet 421™ anti-mouse TNF-α Antibody	Biolegend	Cat#506328
APC anti-mouse Ly-6G/Ly-6C (Gr-1) Antibody	Biolegend	Cat#108412
PE/Cyanine7 anti-mouse Ly-6C Antibody	BD Pharmingen	Cat# 560593

Brilliant Violet 421™ anti-mouse TIGIT(Vstm3) Antibody	Biolegend	Cat#142111
TIM3 Monoclonal antibody	Proteintech®	Cat# 60355-1-Ig
CD68 Monoclonal Antibody(KP1),eBioscience	Thermo Fisher	Cat# 14-0688-82
FITC Anti-C1q antibody	Abcam	Cat# ab4223
FABP5 antibody	Proteintech®	Cat# 12348-1-AP
C1qA antibody	Proteintech®	Cat# 67063-1-Ig
PPAR Gamma Polyclonal antibody	Proteintech	Cat# 16643-1-AP
PPAR Gamma Monoclonal antibody	Proteintech	Cat# 66936-1-Ig
Anti-CD68 antibody [KP1]	Abcam	Cat# ab955
Anti-CD206 antibody	Abcam	Cat# ab64693
Anti-FOXP3 antibody	Abcam	Cat# ab215206
Anti-CD8 antibody	Abcam	Cat# ab209775
Chemicals, peptides, and recombinant proteins		
Anti-Mouse CD279 (PD-1)- Purified In vivo GOLD™ Functional Grade	Leinco	Cat# P362
SBFI26	Selleck	Cat# S9957
Cell Activation Cocktail (with Brefeldin A)	Biolegend	Cat# 423304
pHrodo Green E coli BioParticles	Invitrogen	Cat# P35366
BODIPY 493/503	Cayman	Cat# 25892
Collagenase, type IV	Servicebio	Cat# GC305015
Lymphoprep™	STEMCELL	Cat# 7851
EasySep Mouse CD8a Positive Selection Kit II	STEMCELL	Cat# 18001
EasySep Mouse F4/80 Positive Selection Kit	STEMCELL	Cat# 100-0659
EasySep Human CD14 Positive Selection Kit II	STEMCELL	Cat# 17858
EasySep Human CD8 Positive Selection Kit II	STEMCELL	Cat# 17853
Dual Luciferase Reporter Gene Assay Kit	Vazyme	Cat# DL101-01
Protease inhibitor	Servicebio	Cat# G2006
PMSF	Servicebio	Cat# G2008
RIPA Lysis Buffer	Servicebio	Cat# G2002
TRIzol reagent	TAKARA	Cat# 9109
Invitrogen™ eBioscience™ IC Fixation Buffer	Invitrogen	Cat# 00-8222-49
Foxp3/Transcription Factor Staining Buffer	eBioscience	Cat# 00-5523-00

Set		
Hiscript qRT-PCR SuperMix	Vazyme	Cat# R122-01
AceQ qPCR SYBR Green Master Mix	Vazyme	Cat# Q111-02
Lipofectamine 3000	Thermo Fisher	Cat# L3000150
D-luciferin, Potassium Salt	Maokangbio	Cat# MX4603
Dual Luciferase Reporter Assay Kit	Vazyme	Cat# DL101-01
BCA Protein Assay Kit	Beyotime	Cat# P0012
SimpleChIP® Enzymatic Chromatin IP Kit (Magnetic Beads)	Cell signaling technology	Cat# 9003
Deposited data		
Data files for human scRNA-seq	This paper	GEO:
Human non-small cell lung cancer scRNA-seq	(Zilionis et al., 2019)	GEO: GSE127465
Human kidney renal clear cell carcinoma scRNA-seq	(Yu et al., 2023)	GEO: GSE207493
Human colorectal cancer scRNA-seq	(Zhang et al., 2020)	GEO: GSE146771
Experimental models: cell lines		
LLC-LUC	ATCC	ATCC, CRL-1642-LUC2
LLC	ATCC	ATCC, CRL-1642
Experimental models: organisms/strains		
C57BL/6 mice	Beijing Vital River Experimental Animal Technology Co., Ltd.	N/A
Software and algorithms		
FlowJo V10	Tree Star	N/A
Prism 8	GraphPad	N/A
R studio	RStudio. Inc., Boston, MAReference	https://www.rstudio.com/