

Supplementary Table 1. Characteristics of 36 patients with gastric cancer in Local cohort

Number	Patient code	Age	Sex	Histopathological diagnosis	Tumor site	AJCC stage	immune_p henotype	CD8 center	CD8 margin
1	NXH	70	Male	Adenocarcinoma	Cardia	IIA	Inflamed	34	77
2	ZYM	60	Female	Adenocarcinoma	Mixed	IIIB	Inflamed	124	66
3	WCH	65	Male	Adenocarcinoma	Antrum	IIIC	Inflamed	138	94
4	ZAJ	72	Female	Adenocarcinoma	Body	IIIC	Excluded	1	47
5	CCQ	74	Male	Adenocarcinoma	Cardia	IIB	Excluded	10	154
6	FZJ	64	Male	Adenocarcinoma	Cardia	IIIA	Excluded	4	43
7	LYH	73	Male	Adenocarcinoma	Cardia	IIB	Inflamed	57	56
8	CMS	61	Male	Adenocarcinoma	Cardia	IIIB	Excluded	5	67
9	LSX	74	Male	Adenocarcinoma	Cardia	IA	Desert	4	1
10	CWT	70	Male	Adenocarcinoma	Cardia	IA	Desert	2	5
11	LJH	51	Male	Adenocarcinoma	Antrum	IIIC	Excluded	6	32
12	ZMF	71	Male	Adenocarcinoma	Antrum	IIIB	Inflamed	135	104
13	LYQ	66	Male	Adenocarcinoma	Cardia	IIIA	Excluded	8	137
14	LYJ	70	Female	Adenocarcinoma	Cardia	IIIA	Excluded	5	102
15	YTF	79	Male	Adenocarcinoma	Cardia	IIIA	Inflamed	18	68
16	QLZ	73	Female	Adenocarcinoma	Body	IIB	Excluded	1	101
17	XHY	55	Female	Adenocarcinoma	Body	IIIB	Desert	12	14
18	LHG	54	Male	Adenocarcinoma	Antrum	IIIB	Inflamed	102	68
19	ZDL	44	Male	Adenocarcinoma	Antrum	IIIA	Excluded	0	89
20	CBJ	72	Male	Adenocarcinoma	Body	IIIB	Excluded	4	52
21	LYW	65	Male	Adenocarcinoma	Cardia	IIIA	Desert	5	8
22	LDC	52	Male	Adenocarcinoma	Cardia	IIA	Excluded	0	21
23	LYH	69	Female	Adenocarcinoma	Antrum	IB	Inflamed	78	89
24	YJF	66	Male	Adenocarcinoma	Cardia	IIIC	Excluded	0	68
25	PSQ	57	Male	Adenocarcinoma	Antrum	IIIB	Excluded	0	55
26	LYG	67	Male	Adenocarcinoma	Body	IIIC	Excluded	1	52
27	GXT	67	Male	Adenocarcinoma	Cardia	IIIB	Desert	7	8
28	QWJ	68	Male	Adenocarcinoma	Antrum	IIIA	Inflamed	89	112
29	JJB	68	Male	Adenocarcinoma	Body	IIIB	Desert	1	6
30	LJG	82	Male	Adenocarcinoma	Cardia	IIA	Excluded	2	56
31	HYM	58	Female	Adenocarcinoma	Cardia	IIA	Inflamed	158	67
32	HJM	71	Male	Adenocarcinoma	Cardia	IIA	Desert	3	2
33	XXB	56	Female	Adenocarcinoma	Body	IIB	Desert	0	0
34	LSB	64	Male	Adenocarcinoma	Cardia	IIB	Inflamed	65	158
35	WSJ	64	Male	Adenocarcinoma	Antrum	IIIA	Inflamed	23	55
36	JJX	62	Female	Adenocarcinoma	Body	IIIB	Excluded	21	110

Supplementary Table 2. Gene expression profiles (GEPs)

T_cell_inflamed_GEP symbol	EMT GEP (for bulk samples) symbol	weight	EMT GEP (for cell lines) symbol	weight
CXCR6	KRT19	-12.68	CDH1	-18.83
TIGIT	AGR2	-12.52	AGR2	-17.53
CD27	RAB25	-12.37	EPCAM	-16.72
PDCD1LG2	CDH1	-11.12	KRT19	-16.52
CD274	ERBB3	-10.31	RAB25	-16.41
CD8A	FXYD3	-10.1	TACSTD2	-15.26
LAG3	SLC44A4	-9.84	S100P	-13.79
NKG7	S100P	-9.05	CEACAM6	-13.34
CCL5	SCNN1A	-8.78	GALNT3	-13.22
CMKLR1	GALNT3	-8.75	FXYD3	-13.01
PSMB10	PRSS8	-8.39	SPINT2	-12.4
CXCL9	ELF3	-8.32	TMEM30B	-11.94
IDO1	CEACAM6	-8.24	SCNN1A	-11.45
HLA-DQA1	TMPRSS4	-8.14	ST14	-11.26
CD276	CLDN7	-8.14	ESRP1	-11.24
STAT1	TACSTD2	-8.1	S100A14	-10.88
HLA-DQB1	CLDN3	-8.03	CLDN7	-10.76
HLA-E	EPCAM	-7.92	ERBB3	-10.72
	SPINT1	-7.56	RBM47	-10.44
	TSPAN1	-7.41	SPINT1	-10.32
	PLS1	-7.39	ELF3	-10.08
	TMEM30B	-7.38	CLDN4	-9.91
	PRR15L	-7.26	PRSS8	-9.84
	KRT8	-7.2	SH3YL1	-9.75
	ST14	-7.11	EHF	-9.46
	RBM47	-7.03	LCN2	-9.35
	S100A14	-7.01	JUP	-9.28
	C1orf106	-7	VAMP8	-9.28
	NQO1	-7	KRT8	-8.86
	TOX3	-6.99	C1orf106	-8.39
	PTK6	-6.95	KRT7	-8.38
	TFF1	-6.87	DSP	-8.35
	CLDN4	-6.87	CDS1	-8.28
	GPRC5A	-6.87	ITGB4	-8.11
	TJP3	-6.87	TMPRSS4	-8.03
	KRT18	-6.73	LSR	-7.95
	MAP7	-6.56	SORL1	-7.9
	CKMT1A	-6.51	GRHL2	-7.89
	ESRP1	-6.47	PPL	-7.84
	MUC1	-6.4	C1orf116	-7.83
	SPINT2	-6.25	TSPAN1	-7.76

ESRP2	-6.2 MAP7	-7.61
CDS1	-6.14 SLPI	-7.41
PPAP2C	-6.08 TOX3	-7.24
CEACAM7	-6.05 ARHGAP8	-7.13
TTC39A	-6.02 F11R	-7.11
OVOL2	-5.9 LAD1	-6.86
EHF	-5.88 GPX2	-6.7
AP1M2	-5.83 CTSH	-6.65
CEACAM5	-5.75 GPR56	-6.62
LAD1	-5.7 FA2H	-6.5
ARHGAP8	-5.63 KLF5	-6.48
TFF3	-5.49 AREG	-6.42
JUP	-5.47 KRT18	-6.42
CD24	-5.45 SCEL	-6.4
TMC5	-5.39 CDH3	-6.34
MLPH	-5.38 UGT1A1	-6.33
ELMO3	-5.33 MPZL2	-6.15
ERBB2	-5.16 AIM1	-6.13
LLGL2	-5.11 OVOL2	-6.07
DDR1	-5.1 LLGL2	-6.05
FA2H	-5.06 ESRP2	-6.02
CBLC	-4.95 MYO5C	-6.01
TMPRSS2	-4.95 DDR1	-5.98
LSR	-4.93 VGLL1	-5.91
PERP	-4.86 IRF6	-5.89
POF1B	-4.81 SFN	-5.88
MYO5C	-4.8 TSPAN13	-5.85
RAB11FIP1	-4.76 KCNK1	-5.81
MAPK13	-4.75 MYO1D	-5.72
KRT7	-4.74 PKP3	-5.7
CEACAM1	-4.69 ITGB6	-5.69
CXADR	-4.68 LY75	-5.65
ATP2C2	-4.65 MAPK13	-5.59
RNF128	-4.64 TTC39A	-5.57
MPZL2	-4.61 ELMO3	-5.49
EPS8L1	-4.58 CEACAM1	-5.37
GALNT7	-4.45 DTX4	-5.36
CORO2A	-4.43 ERBB2	-5.32
BCAS1	-4.41 RAB11FIP1	-5.32
TPD52	-4.36 ATP2C2	-5.28
ARHGAP32	-4.26 MST1R	-5.28
FUT2	-4.25 AP1M2	-5.27
OR7E14P	-4.22 TGFA	-5.21
GALE	-4.16 MYO6	-5.14

GRHL2	-4.14	PTK6	-5.09
BIK	-4.1	OAS1	-5.08
RAPGEFL1	-4.07	FBP1	-5
STYK1	-4.05	AQP3	-4.97
F11R	-4.04	CBLC	-4.94
PKP3	-4.03	EPHA1	-4.93
CYB561	-4.03	BSPRY	-4.92
SH3YL1	-3.95	SH2D3A	-4.9
GDF15	-3.93	EPS8L1	-4.9
PSCA	-3.92	GRB7	-4.83
EZR	-3.88	C4orf19	-4.81
TJP2	-3.87	KLK6	-4.75
FGFR3	-3.86	TJP2	-4.75
FUT3	-3.85	PLS1	-4.75
BSPRY	-3.84	DENND2D	-4.73
TOM1L1	-3.82	EPS8L2	-4.59
IRF6	-3.74	IL20RA	-4.59
EPB41L4B	-3.74	HES1	-4.57
SPDEF	-3.72	IL1RN	-4.54
OCN	-3.7	EXPH5	-4.5
LRRC1	-3.65	ARHGDIB	-4.49
C19orf21	-3.64	C19orf21	-4.47
ABHD11	-3.57	CAMK2N1	-4.46
EPS8L2	-3.55	HPGD	-4.44
MYO6	-3.55	SYNGR2	-4.44
TSPAN8	-3.53	C10orf116	-4.43
MST1R	-3.5	PERP	-4.42
SLC16A5	-3.5	MANSC1	-4.37
GPR56	-3.47	DSC2	-4.33
AZGP1	-3.47	POF1B	-4.3
TOB1	-3.43	SERINC5	-4.27
SLC35A3	-3.42	BIK	-4.25
TRPM4	-3.42	ANXA9	-4.25
PHLDA2	-3.42	MALL	-4.24
VAMP8	-3.42	EPN3	-4.23
SLC22A18	-3.42	STAP2	-4.23
AKR1B10	-3.4	FOXA1	-4.2
VAV3	-3.38	PYCARD	-4.2
SPAG1	-3.38	ZNF165	-4.17
ABCC3	-3.37	SLC37A1	-4.14
SYNGR2	-3.37	ANK3	-4.02
STAP2	-3.28	TSPAN15	-4.01
C4orf19	-3.28	HNMT	-4.01
PPL	-3.27	ABCC3	-4.01

PLLP	-3.26 SDC1	-4
DSG2	-3.26 CKMT1A	-3.99
HDHD3	-3.25 TOB1	-3.98
CD2AP	-3.25 B3GNT3	-3.96
MANSC1	-3.24 TMC6	-3.93
DHCR24	-3.24 CD9	-3.89
EPN3	-3.23 ADAP1	-3.88
TUFT1	-3.22 ATP1B1	-3.86
GMDS	-3.22 SHANK2	-3.81
EXPH5	-3.18 CYB561	-3.81
DSP	-3.17 ERMP1	-3.78
SDC4	-3.17 RAB20	-3.75
IL20RA	-3.13 MYH14	-3.73
FAM174B	-3.13 CAPN1	-3.69
PTPRF	-3.11 ALDH3B2	-3.65
SORD	-3.1 TRIM31	-3.65
GAS1	8.43 ARAP2	-3.64
CXCL12	7.13 SSH3	-3.61
ZEB1	6.56 ICA1	-3.55
GLYR1	6.18 ARHGEF5	-3.54
FHL1	6.15 ALOX5	-3.52
FERMT2	6.06 RHOD	-3.44
C1S	5.84 Tmprss2	-3.43
FYN	5.84 MTUS1	-3.41
WIPF1	5.8 CYP4F3	-3.37
CYP1B1	5.56 PPFIBP2	-3.36
SERPING1	5.63 RABGAP1L	-3.36
SERPINF1	5.48 PLXNB2	-3.33
VCAM1	5.4 MGST2	-3.31
MAP1B	5.39 OR7E14P	-3.3
TCF4	5.33 EVPL	-3.3
SRPX	5.31 CD46	-3.28
EMP3	5.29 KRT15	-3.22
DPT	5.24 CNKSR1	-3.2
CALD1	5.21 BLNK	-3.17
PTGIS	5.11 COMT	-3.16
VIM	5.04 ANXA4	-3.15
CD163	5.04 TNFSF13	-3.15
C1R	5.02 OCLN	-3.14
FBN1	5.02 SLC9A3R1	-3.14
FN1	4.94 XBP1	-3.11
FXVD6	4.86 VIM	12.31
IGF1	4.82 ZEB1	11.4
NAP1L3	4.81 EMP3	10.27

MRC1	4.74 SACS	7.56
QKI	4.67 AXL	7.29
MS4A4A	4.65 LOXL2	6.57
DCN	4.64 SPARC	6.51
LOX	4.53 FHL1	6.45
RECK	4.53 FERMT2	6.42
ANK2	4.53 TUBA1A	6.32
LY96	4.5 TMEM158	6.09
ZFPM2	4.46 CALD1	5.94
CSRP2	4.45 LGALS1	5.92
EFEMP1	4.44 PMP22	5.89
RARRES2	4.38 MSN	5.51
PTPRC	4.34 GLYR1	5.38
PLEKHO1	4.33 MAP1B	5.24
RGS2	4.32 AP1S2	5.13
F13A1	4.31 GJA1	4.8
JAM2	4.25 DENND5A	4.75
CHRDL1	4.22 C12orf24	4.7
TUBA1A	4.21 TPM2	4.65
AP1S2	4.19 TUBB6	4.63
MYLK	4.17 SRPX	4.48
DDR2	4.17 ANK2	4.18
DSE	4.17 CHN1	4.06
SACS	4.17 SH2B3	4.06
GLIPR1	4.16 LEPRE1	3.9
CXCL13	4.15 ETV1	3.84
FLRT2	4.13 SOBP	3.81
PTX3	4.12 AKAP12	3.78
AKT3	4.1 TGFB1I1	3.75
COL6A2	4.07 SERPINE1	3.7
DPYSL3	4.06 SOAT1	3.69
CDH11	4.04 COL5A2	3.61
PDZRN3	4.02 LHFP	3.6
ZEB2	4.01 CEP170	3.57
CCL2	4.01 POPDC3	3.54
MAFB	3.99 TRPC1	3.53
SFRP1	3.98 KDELC1	3.44
C14orf139	3.97 MYL9	3.36
MFAP4	3.96 BAG2	3.36
MAF	3.95 FSTL1	3.34
UCHL1	3.94 MXRA7	3.34
TUBB6	3.93 GFPT2	3.33
SRGN	3.91 RECK	3.29
HEG1	3.91 TMEFF1	3.22

KCNJ8	3.86 PTRF	3.14
AKAP12	3.85	
EVI2A	3.84	
COL14A1	3.84	
AXL	3.82	
ECM2	3.81	
FSTL1	3.79	
PLN	3.77	
MYL9	3.77	
OLFML3	3.76	
STON1	3.75	
SLIT2	3.75	
BICC1	3.75	
SOBP	3.75	
CLIC4	3.74	
ENPP2	3.73	
SAMSN1	3.72	
TPM2	3.7	
ASPN	3.7	
COL6A1	3.69	
IGFBP5	3.68	
MOXD1	3.68	
AKAP2	3.68	
SLC2A3	3.67	
OLFML2B	3.65	
ANGPTL2	3.64	
PCOLCE	3.62	
COLEC12	3.62	
CTSK	3.62	
TAGLN	3.6	
CDH2	3.6	
IL10RA	3.6	
C1orf54	3.6	
CEP170	3.59	
TNS1	3.59	
CLEC2B	3.58	
JAM3	3.57	
SEPT6	3.56	
GREM1	3.55	
VCAN	3.54	
ZCCHC24	3.54	
CRYAB	3.54	
SFRP4	3.53	
RUNX1T1	3.52	

FGL2	3.51
MS4A6A	3.51
PTRF	3.48
GIMAP4	3.48
TWIST1	3.48
GFPT2	3.47
LHFP	3.47
CXCR4	3.47
SPOCK1	3.46
SPARC	3.46
VSIG4	3.44
GPM6B	3.42
TRPC1	3.41
SNAI2	3.39
GUCY1B3	3.37
PLXNC1	3.36
SYT11	3.36
FLI1	3.36
MYH10	3.35
CSF2RB	3.34
TNC	3.34
PMP22	3.34
COL5A2	3.34
MMP2	3.33
GNG11	3.33
CAV1	3.31
CDK14	3.3
SDC2	3.3
PTGDS	3.3
NR3C1	3.29
SYNM	3.29
FAP	3.28
NUAK1	3.28
WWTR1	3.26
FBLN1	3.26
MPDZ	3.23
SYNE1	3.23
EFEMP2	3.22
GIMAP6	3.2
KIAA1462	3.2
CCL8	3.2
COL15A1	3.2
CHN1	3.2
CRISPLD2	3.19

PDGFC	3.18
GEM	3.17
ISLR	3.14
GZMK	3.14
SPARCL1	3.14
BNC2	3.12
BGN	3.12
MEOX2	3.1
ITM2A	3.1
IFFO1	3.1

Supplementary Table 3. Reagents and Kits

Name	Source	Catalogue Number
2nd Generation packaging	Abmgood	LV003
Polybrene	Sigma-aldrich	TR-1003
LipoJet Reagent	Signagen	#SL100468
PolyJet Reagent	Signagen	#SL100688
Recombinant Human FGF-basic (154 a.a.)	peprotech	100-18B
Recombinant Human PDGF-BB	peprotech	100-14B
Recombinant Human TGF-β1	peprotech	100-21
Recombinant Human IFN-gamma Protein	novusbio	NBP2-34992
ChIP-IT Express Enzymatic	Active motif	#53039
ChIP-IT High Sensitivity	Active motif	#53040
Dovitinib (TKI-258)	Selleckchem	S1018
Lenvatinib	Selleckchem	S1164
Tivozanib	Selleckchem	S1207
Collagenase A, ACF	STEMCELL Technologies Inc	# 07435
Corning™ MITO+ Serum Extender	Thomas Scientific	No. 355006
eBioscience™ Intracellular Fixation & Permeabilization Buffer Set	thermofisher	88-8824-00
eBioscience™ Flow Cytometry Staining Buffer	thermofisher	00-4222-26
pLX317-SNAI1	Addgene	#115446
SNAI 1 siRNA (h)	Santa cruz	sc-38398
SlugMyc_pcDNA3	Addgene	#31698
siSlug1	Addgene	#10903
3.6kb human IFN-gamma luc	Addgene	#17599
53 bp human IFN-gamma luc	Addgene	#17597
PL-CRISPR.EFS.tRFP-gIfngr1-2	Addgene	#166480
Corning® BioCoat™ Matrigel® Invasion Chambers	WORLDWIDE MEDICAL PRODUCTS, INC.	#354480
6.5 mm Transwell® with 8.0 μm Pore Polycarbonate Membrane Insert	Thomas Scientific	#3422
Ficoll-Paque® PLUS Medium	VWR	95021-205
CellTreat Permeable Cell Culture Inserts	stellarscientific	CT230603
Amicon® Ultra-4 Centrifugal Filter Units	Millipore-sigma	UFC801024
CXCL9/MIG elisa kit :: Mouse CXCL9/MIG ELISA Kit	mybiosource	MBS2501424
MIG/CXCL9 ELISA Kit, Human	sinobiologica	KIT10888
IFNg elisa kit :: Human Interferon Gamma (IFNg)	mybiosource	MBS2700895
IFNg elisa kit :: Mouse Interferon Gamma (IFNg)	mybiosource	MBS2700896
Recombinant Human IL-2 10ug	peprotech	200-02
Streptavidin MicroBeads, (for 1×10 ⁹ total cells)	miltenyibiotec	130-048-102
MS Columns plus tubes	miltenyibiotec	130-122-727
CD3 Monoclonal Antibody (UCHT1), Biotin	Thermofisher	13-0038-82
Corning® Matrigel® Basement Membrane Matrix	Corning	#354234
Gibco™ HEPES (1M)	fisher scientific	15-630-080
Dulbecco's Modified Eagle's Medium - high glucose	Sigma-Aldrich	D6429-6X500ML

Supplementary Table 4. Antibodies and dilutions

Antibody	Source	Catalogue Number	Application	Working Dilution
InVivoMAb anti-mouse IFN γ	BioXCell	BE0054	in vitro	/
InVivoMAb rat IgG1 Isotype control	BioXCell	BE0290	in vitro	/
Ultra-LEAF™ Purified anti-human IFN- γ	biolegend	#506532	in vitro	/
Ultra-LEAF™ Purified Mouse IgG1	biolegend	#400166	in vitro	/
InVivoMAb anti-mouse CTLA-4 (CD152)	Bio x cell	BE0032	in vivo/in vitro	/
InVivoMAb polyclonal Armenian hamster IgG	Bio x cell	BE0091	in vivo	/
CD28 Monoclonal Antibody (CD28.2)	thermofisher scientific	16-0289-81	T cell activation	/
CD3 Monoclonal Antibody (OKT3)	thermofisher scientific	16-0037-81	T cell activation	/
CD3 Monoclonal Antibody (OKT3)	thermofisher scientific	13-0037-82	T cell isolation	/
Mouse CD3 Antibody	rndsystems	MAB4841-SP	IF	1:200
Human/Mouse FoxP3 Antibody	rndsystems	MAB8214-SP	IF	1:200
Mouse CD4 Antibody	rndsystems	MAB554-SP	IF	1:200
Mouse Granzyme B Antibody	rndsystems	AF1865-SP	IF	1:200
IFN-gamma Antibody [Unconjugated]	Novus Biologicals	AF-585-SP	IF	1:200
Anti-CD8 alpha antibody [EPR21769]	abcam	ab217344	IF	1:400
PE/Dazzle™ 594 anti-mouse CD45 Antibody	biolegend	#103145	Flow cytometry	1:50
Granzyme B Monoclonal Antibody (NGZB), PE-Cyanine7, eBioscience™	thermofisher	25-8898-82	Flow cytometry	1:50
BB515 Rat Anti-Mouse CD8a	BDBiosciences	#564422	Flow cytometry	1:50
PE anti-mouse CD4 Antibody	biolegend	#100512	Flow cytometry	1:50
BD Horizon™ BV711 Hamster Anti-Mouse CD3e	BDBiosciences	#563123	Flow cytometry	1:50
ZEB1 (E2G6Y) XP® Rabbit mAb	Cell Signaling	#70512	WB	1:1000
PDGF Receptor β (28E1)	Cell Signaling	3169T	WB	1:1000
Vimentin (D21H3) XP® Rabbit mAb	Cell Signaling	5741S	WB	1:1000
E-Cadherin (4A2) Mouse mAb	Cell Signaling	14472S	WB	1:1000
Stat1 (D1K9Y) Rabbit mAb #14994	Cell Signaling	14994T	WB	1:1000
IRF-1 (D5E4) XP® Rabbit mAb #8478	Cell Signaling	8478T	WB	1:1000
Human/Mouse Phospho-STAT1 (Y701)	R&D Systems	AF2894-SP	WB	1:1000
CXCL9/MIG (E7X3P) Rabbit mAb	Cell Signaling	#93556	WB	1:1000
Snail (C15D3) Rabbit mAb	Cell Signaling	#3879	WB,ChIP	1:1000
FGF Receptor 1 (D8E4) XP®	Cell Signaling	#9740	WB	1:1000
Phospho-PDGF Receptor β (Tyr751)	Cell Signaling	#4549	WB	1:1000
IFN- γ (3F1E3) Mouse mAb #3159	Cell Signaling	#3159S	WB	1:1000
Anti-phospho-FGFR-1 (Tyr653/Tyr654)	Sigma-Aldrich	06-1433-25UG	WB	1:1000
anti-IFNGR1 antibody	mybiosource	MBS2523950	WB	1:1000
CD80 (E3Q9V) Rabbit mAb	Cell Signaling	#15416	WB	1:1000
Slug (C19G7) Rabbit mAb	Cell Signaling	#9585	WB,ChIP	1:1000
β -actin	Sigma-Aldrich	A1978	WB	1:4000
Stat3 (D3Z2G) Rabbit mAb	Cell Signaling	#12640s	WB	1:1000
Phospho-Stat3 (Tyr705) (M9C6) Mouse mAb	Cell Signaling	#4113	WB	1:1000
p-AKT(S473)	Cell Signaling	#4060	WB	1:1000
AKT	Cell Signaling	#9272	WB	1:1000
MEK	Cell Signaling	#9126	WB	1:1000
p-MEK(S217/221)	Cell Signaling	#9154	WB	1:1000
HRP-coupled anti-mouse,anti-rabbit	Promega	W4021,W4011	WB	1:4000
Normal IgG	EMD Millipore corp.	3281600	IP, ChIP	/

Supplementary Table 5. Oligonucleotide sequence of primers

gene name (m:mouse,h:human)	Sequences		Assay
	Forward	Reverse	
mCxcl9	GGAGTTCGAGGAACCCTAGTG	GGGATTTGTAGTGGATCGTGC	Regular qRT-PCR
mCxcl10	CCAAGTGCTGCCGTCATTTTC	GGCTCGCAGGGATGATTTCAA	Regular qRT-PCR
mCxcl11	GGCTTCCTTATGTTCAAACAGGG	GCCGTTACTCGGGTAAATTACA	Regular qRT-PCR
mCxcl13	GGCCACGGTATTCTGGAAGC	GGGCGTAACTTGAATCCGATCTA	Regular qRT-PCR
mCcl4	TTCCTGCTGTTTCTCTTACACCT	CTGTCTGCCTCTTTTGGTCAG	Regular qRT-PCR
mCcl5	GCTGCTTTGCCTACCTCTCC	TCGAGTGACAAACACGACTGC	Regular qRT-PCR
mlfng	ATGAACGCTACACACTGCATC	CCATCCTTTTGCCAGTTCCTC	Regular qRT-PCR
mlfnb1	CAGCTCCAAGAAAGGACGAAC	GGCAGTGTAACTCTTCTGCAT	Regular qRT-PCR
hCXCL9	CCAGTAGTGAGAAAGGGTCGC	AGGGCTTGGGGCAAATTGTT	Regular qRT-PCR
hCXCL10	GTGGCATTCAAGGAGTACCTC	TGATGGCCTTCGATTCTGGATT	Regular qRT-PCR
hCXCL11	GACGCTGTCTTTGCATAGGC	GGATTTAGGCATCGTTGTCTTT	Regular qRT-PCR
hCXCL13	GCTTGAGGTGTAGATGTGTCC	CCCACGGGGCAAAGATTGAA	Regular qRT-PCR
hCCL4	CTGTGCTGATCCCAGTGAATC	TCAGTTCAGTTCAGGTCATACA	Regular qRT-PCR
hCCL5	CCAGCAGTCGTCTTTGTACAC	CTCTGGGTTGGCACACACTT	Regular qRT-PCR
hCCL18	GCTGCCTCGTCTATACCTCC	CCGGCCTCTCTTGGTTAGGA	Regular qRT-PCR
hIFNG	TCGGTAACTGACTTGAATGTCCA	TCGCTCCCTGTTTTAGCTGC	Regular qRT-PCR
hIFNA1	GCCTCGCCCTTTGCTTTACT	CTGTGGGTCTCAGGGAGATCA	Regular qRT-PCR
hIFNB1	ATGACCAACAAGTGTCTCCTCC	GGAATCCAAGCAAGTTGTAGCTC	Regular qRT-PCR
hCD274	TGGCATTGCTGAACGCATT	TGCAGCCAGGTCTAATTGTTTT	Regular qRT-PCR
mCd274	GCTCCAAAGGACTTGTACGTG	TGATCTGAAGGGCAGCATTTC	Regular qRT-PCR
hCD80	AAACTCGCATCTACTGGCAAA	GGTCTTGTACTCGGGCCATA	Regular qRT-PCR
mCd80	ACCCCAACATAACTGAGTCT	TTCCAACCAAGAGAAGCGAGG	Regular qRT-PCR
hVIM	AGTCCACTGAGTACCGGAGAC	CATTCACGCATCTGGCGTTC	Regular qRT-PCR
mVim	CGGCTGCGAGAGAAATTGC	CCACTTCCGTTCAAGGTCAAG	Regular qRT-PCR
hCDH1	CGAGAGCTACACGTTACGG	GGGTGTCGAGGGAAAAATAGG	Regular qRT-PCR
mCdh1	CAGGTCTCCTCATGGCTTTGC	CTTCCGAAAAGAAGGCTGTCC	Regular qRT-PCR
IFNG-P1	GTGCCTTCAAAGAATCCCACC	GGTTTTGTGGCATTGGGTGT	Chip qRT-PCR
IFNG-P2	ACGTAATCCTCAGGAGACTTCA	GCTGATCAGGTCCAAGGACT	Chip qRT-PCR

Supplementary Table 6. Source of 14 patients with gastric cancer

Number	Sample code	Source	Age	Sex	Histopathological diagnosis
1	4060939	CHTN	71	F	PD adenocarcinoma
2	4060718	CHTN	79	F	MD adenocarcinoma
3	1061129	CHTN	56	M	MD adenocarcinoma
4	12021	University of Miami	NA	NA	PD adenocarcinoma
5	1820	University of Miami	NA	NA	PD adenocarcinoma
6	1070328	CHTN	43	M	MD to PD adenocarcinoma
7	4070168A	CHTN	51	M	MD to PD adenocarcinoma
8	1060239	CHTN	68	M	adenocarcinoma
9	4008126	CHTN	83	F	signet ring carcinoma
10	1060214	CHTN	83	M	MD to PD adenocarcinoma
11	4060649	CHTN	72	M	PD adenocarcinoma
12	01-12-1027A	CHTN	NA	NA	adenocarcinoma
13	41940A3B	CHTN	76	M	adenocarcinoma
14	41018A1D	CHTN	60	M	adenocarcinoma

CHTN: Cooperative Human Tissue Network

NA: not available