

Supplementary Table 1. Antibodies and other reagents

Antibodies and reagents	Manufacturers
Antibodies for flow cytometry	
anti-CD45-PE-Cy7	Biologend
anti-CD66b-FITC	Biologend
anti-PD-L1-PE	Biologend
anti-CD54-APC	Biologend
anti-PD-1-PE	Biologend
anti-HLA-DR-PerCP-Cy5.5	Biologend
anti-CD4-PerCP-Cy5.5	Biologend
anti-CD8-PerCP-Cy5.5	Biologend
anti-CD3-APC-H7	BD Pharmingen
anti-IFN- γ -PE-Cy7	BD Pharmingen
Antibodies for immunohistochemical staining	
anti-CD15	Dako
anti-CD3	Dako
anti-proliferating cell nuclear antigen (PCNA)	Santa Cruz
horseradish peroxidase anti-rabbit IgG	Zhongshan Biotechnology
EnVision™ G2 System/AP Rabbit/Mouse (Permanent Red)	Dako
Antibodies for immunofluorescence	
rabbit anti-human anti-CD3	Abcam
mouse anti-human anti-CD15	Abcam
rabbit anti-human anti-EpCam	Abcam
mouse anti-human anti-GM-CSF	Abcam
goat anti-rabbit-TRITC	Zhongshan Biotechnology
goat anti-mouse-FITC	Zhongshan Biotechnology
Antibodies for neutralizing and blocking	
anti-GM-CSF	eBioscience
anti-PD-L1	R&D Systems
Antibodies for western blot	
anti-STAT3	Santa Cruz
anti-p-STAT3 (Y705)	Cell signaling technology
Purified anti-CD3 and anti-CD28 antibodies	Biologend
ELISA kits	
GM-CSF	R&D Systems
perforin	Abcam
granzyme B	eBioscience
Reagents for signaling pathways inhibition	

STAT3 phosphorylation inhibitor FLLL32	MedKoo Biosciences
JAK signaling inhibitor AG490	Merk Millipore
IκBα inhibitor BAY 11-7082	Calbiochem
JNK inhibitor SP600125	Calbiochem
MAPK inhibitor SB203580	Calbiochem
PI3K inhibitor Wortmannin	Calbiochem
arginase-1 inhibitor nor-NOHA	Santa Cruz
induced nitric oxide synthase (iNOS) inhibitor 1400W	Calbiochem
Collagenase IV	Sigma-Aldrich
DNase I	Sigma-Aldrich
Phorbol myristate acetate	Sigma-Aldrich
Ionomycin	Sigma-Aldrich
DMSO	Sigma-Aldrich
Golgistop and Perm/Wash solution	BD Pharmingen
Carboxylfluorescein succinimidyl ester (CFSE)	eBioscience
Protein Extraction Reagent	Pierce
SuperSignal® West Dura Extended Duration Substrate kit	Thermo
Fetal calf serum (FCS)	Gibco
RPMI-1640	Hyclone
Ficoll-Paque Plus	GE Healthcare
lyses solution	TIANGEN
All recombinant human cytokines and chemokines	PeptoTech

APC-Cy7, allophycocyanin-cyanin 7; PE-Cy7, phycoerythrin-cyanin 7; FITC, Fluorescein isothiocyanate; PE, phycoerythrin; PerCP-Cy5.5, peridin chlorophyl protein-cyanin 5.5; APC, allophycocyanin; IL, interleukin; I IFN, interferon; PD-L1, programmed death-ligand 1; STAT3, signal transducer and activator of transcription 3; EpCam, epithelial cell adhesion molecule.

Supplementary Table 2. Clinical characteristics of 105 patients with gastric cancer

Variables	No. of patients
Gender (male/female)	80/25
Age (years; median, range)	56, 25-82
<i>H.pylori</i> Ab (negative/positive)	27/78
CEA (U/L; <5/≥5)	85/20
Tumour size (cm; <5/≥5)	65/40
Lymphatic invasion (absent/present)	24/81
Vascular invasion (absent/present)	98/7
Tumour (T) invasion (T1+T2/T3+T4)	27/78
Lymphoid Nodal (N) status (N0+N1/N2+N3)	50/55
Distant metastasis (M) status (M0/M1)	97/8
TNM stage (I + II /III+IV)	25/80
Neutrophil percentage ^a (median, range)	5.24, 0.241-54.9

^aNeutrophil percentage was acquired on CD66b⁺ cells in CD45⁺ leukocytes that gated on CD45⁺ leukocytes of tumour tissues. CEA, carcinoembryonic antigen; *H.pylori* Ab, *Helicobacter pylori* antibody.