

Figure S1. Western blot shows α -SMA expression in the direct and Transwell (indirect) co-culture of *H. pylori*, NFs, and AGS cells for 6 h, 72 h, and 7 days at a multiplicity of infection (MOI) of 50. The bar graph shows the quantitation of α -SMA levels.

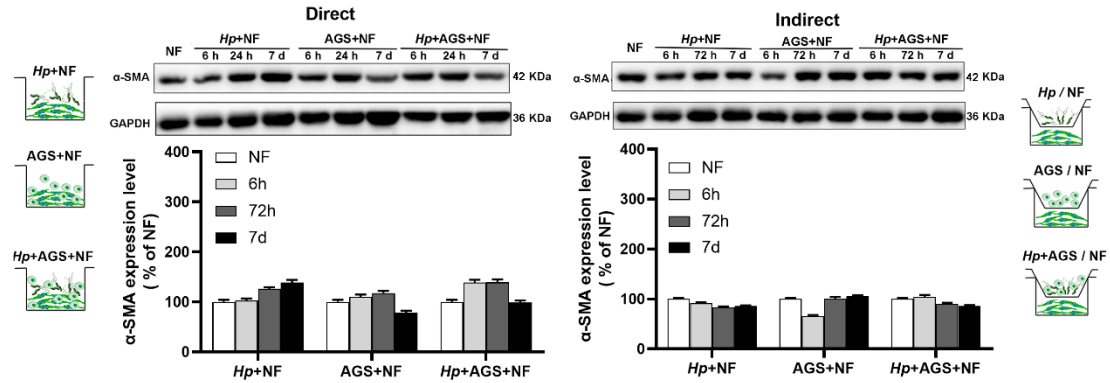


Figure S2. *H. pylori* were present at the cell surface of AGS, CAF, and NF cells infected with *H. pylori* for 7 days via confocal immunofluorescence (A) and the expression of urease B (B), a subunit of urease enzyme generated by *H. pylori*. Free *H. pylori* were removed via washing with PBS at 6 hours after infection.

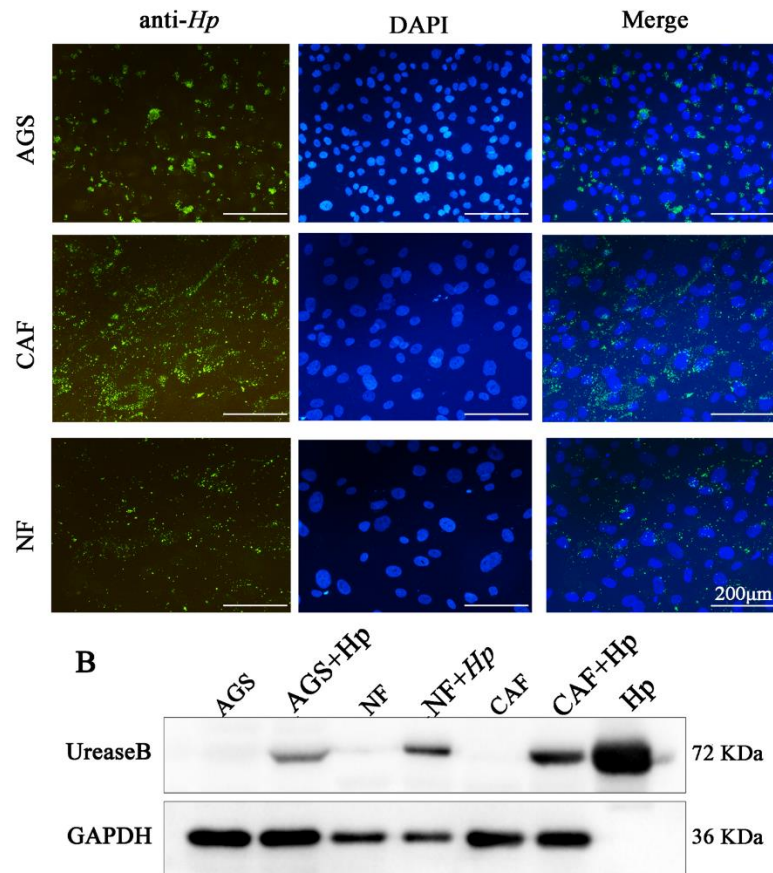


Figure S3. Primary gastric cancer cells were isolated from gastric cancer tissues and

identified by CK-18 and CEA immunohistochemistry staining, soft agar colony formation, and tumor formation in nude mice.

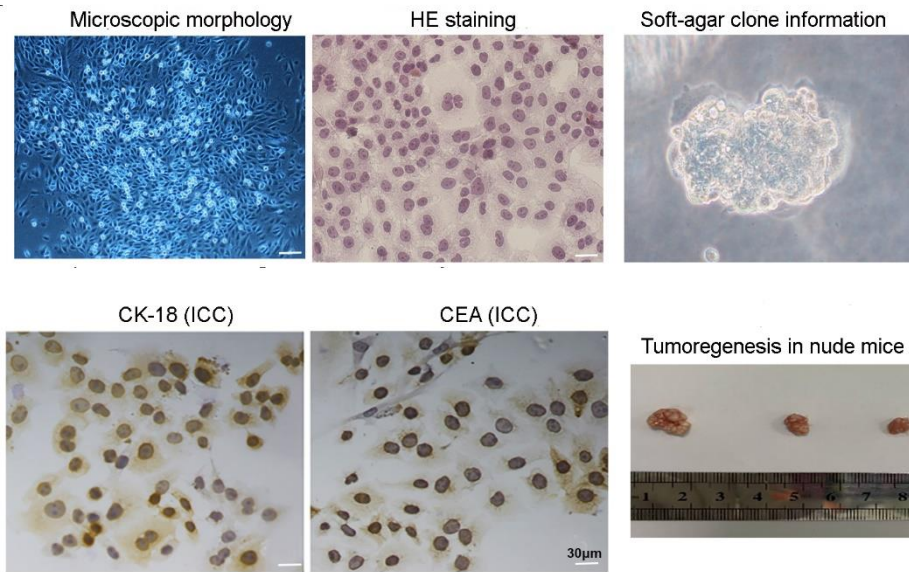
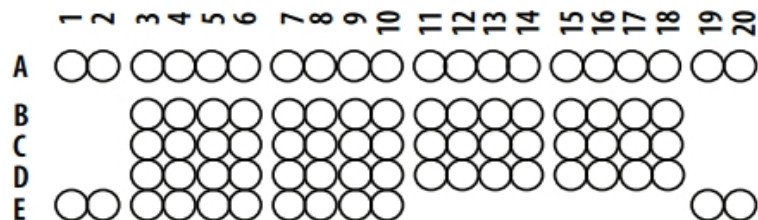


Table S1. Human Cytokine Array List

Human Cytokine Array Coordinates



Coordinate	Target/Control	Entrez Gene ID	Alternate Nomenclature
E19, E20	Negative Control	N/A	-
A1, A2	Reference Spots	N/A	-
A19, A20	Reference Spots	N/A	-
E1, E2	Reference Spots	N/A	-
A3, A4	CCL1	6346	P500, SCYA1, SCYA2, TCA-3
A5, A6	CCL2	6347	MCAF
A7, A8	MIP-1 α	6348/6351	CCL3/CCL4
A9, A10	CCL5	6352	-
A11, A12	CD40 Ligand	959	CD154, CD40LG, gp39, TRAP
A13, A14	Component C5	727	C5/C5a
A15, A16	CXCL1	2919	CINC-1, KC
A17, A18	CXCL10	3627	CRG-2
B3, B4	CXCL11	6373	β -R1, H174
B5, B6	CXCL12	6387	PBSF

B7, B8	G-CSF	1440	CSF β , CSF-3
B9, B10	GM-CSF	1437	CSF α , CSF-2
B11, B12	ICAM-1	3383	-
B13, B14	IFN- γ	3458	Type II IFN
B15, B16	IL-1 α	3552	-
B17, B18	IL-1 β	3553	-
C3, C4	IL-1ra	3557	-
C5, C6	IL-2	3558	TCGF
C7, C8	IL-4	3565	BCDF, BSF1
C9, C10	IL-5	3567	-
C11, C12	IL-6	3569	BSF-2
C13, C14	IL-8	3576	CXCL8, GCP1, NAP1
C15, C16	IL-10	3586	CSIF
C17, C18	IL-12 p70	3592/3593	CLMF p35
D3, D4	IL-13	3596	-
D5, D6	IL-16	3603	LCF
D7, D8	IL-17A	3605	CTLA-8
D9, D10	IL-17E	64806	IL-25
D11, D12	IL-18	3606	IGIF
D13, D14	IL-21	59067	-
D15, D16	IL-27	246778	IL-27 A
D17, D18	IL-32 α	9235	-
E3, E4	MIF	4282	GIF, DER6
E5, E6	Serpin E1	5054	Nexin, PLANH1
E7, E8	TNF- α	7124	TNFSF1A
E9, E10	TREM-1	54210	CD354

Table S2. Characteristics of 161 differentially expressed genes between CAFs and NFs

N	Gene Symbol	Log2FC (CAF/NF) mean	pvalue	FDR	Regulation
1	IL33	4.86	0.0270	0.0350	UP
2	ELN	3.97	0.0301	0.0370	UP
3	PDK4	3.64	0.0217	0.0315	UP
4	GALNT15	3.25	0.0272	0.0350	UP
5	APCDD1L	3.04	0.0003	0.0095	UP
6	LXN	3.04	0.0262	0.0346	UP
7	KYNU	2.98	0.0060	0.0179	UP
8	PCDH7	2.93	0.0125	0.0234	UP
9	ACKR3	2.91	0.0295	0.0370	UP
10	AOC3	2.89	0.0333	0.0394	UP
11	PTGFR	2.82	0.0289	0.0366	UP
12	LUM	2.8	0.0020	0.0112	UP
13	AKR1C2	2.79	0.0338	0.0397	UP
14	MGP	2.76	0.0443	0.0466	UP
15	COL3A1	2.68	0.0426	0.0457	UP
16	DPP4	2.65	0.0498	0.0498	UP
17	ADAM12	2.63	0.0165	0.0268	UP
18	MT1M	2.59	0.0260	0.0346	UP
19	S100A4	2.53	0.0354	0.0401	UP
20	AKR1C1	2.51	0.0254	0.0346	UP
21	ISLR	2.41	0.0019	0.0112	UP
22	LRRK2	2.36	0.0387	0.0427	UP

N	Gene Symbol	Log2FC (CAF/NF) mean	pvalue	FDR	Regulation
23	CPE	2.21	0.0184	0.0285	UP
24	SELENOP	2.21	0.0430	0.0458	UP
25	SPARC	2.21	0.0132	0.0242	UP
26	MEGF9	2.15	0.0058	0.0177	UP
27	ABHD5	2.11	0.0014	0.0112	UP
28	INSIG1	2.08	0.0096	0.0212	UP
29	SSH2	2.00	0.0206	0.0307	UP
30	IL18	1.99	0.0224	0.0322	UP
31	AGTR1	1.97	0.0087	0.0205	UP
32	CHRM2	1.94	0.0474	0.0480	UP
33	SAA1	1.92	0.0114	0.0231	UP
34	FBN1	1.91	0.0079	0.0203	UP
35	PDE1A	1.91	0.0210	0.0310	UP
36	PTN	1.9	0.0028	0.0124	UP
37	CRYBG3	1.88	0.0139	0.0246	UP
38	PLA2R1	1.82	0.0085	0.0205	UP
39	VCAN	1.81	0.0088	0.0205	UP
40	COL4A5	1.79	0.0310	0.0378	UP
41	KCNK1	1.76	0.0008	0.0112	UP
42	ATL1	1.70	0.0001	0.0061	UP
43	TNFAIP8L3	1.63	0.0024	0.0117	UP
44	FAP	1.62	0.0152	0.0255	UP
45	SLC4A4	1.59	0.0470	0.0479	UP
46	ATP2B4	1.52	0.0001	0.0061	UP

N	Gene Symbol	Log2FC				Regulation	N	Gene Symbol	Log2FC				Regulation
		(CAF/NF) mean	pvalue	FDR					(CAF/NF) mean	pvalue	FDR		
47	HS2ST1	1.46	0.0058	0.0177	UP	70	DDX10	-1.31	0.0170	0.0274	DOWN		
48	TSHZ1	1.46	0.0049	0.0172	UP	71	KNDC1	-1.32	0.0300	0.0370	DOWN		
49	C4orf33	1.43	0.0236	0.0336	UP	72	PTP4A3	-1.33	0.0259	0.0346	DOWN		
50	ZNF175	1.42	0.0019	0.0112	UP	73	SMIM1	-1.35	0.0050	0.0172	DOWN		
51	TCF4	1.39	0.0213	0.0312	UP	74	PIP5KL1	-1.36	0.0086	0.0205	DOWN		
52	TMEM154	1.32	0.0241	0.0340	UP	75	CYSTM1	-1.40	0.0014	0.0112	DOWN		
53	POGLUT2	1.29	0.0326	0.0389	UP	76	SLC35F6	-1.43	0.0266	0.0348	DOWN		
54	RNF168	1.24	0.0079	0.0203	UP	77	SLC1A4	-1.49	0.0005	0.0109	DOWN		
55	SOCS5	1.24	0.0025	0.0117	UP	78	AZIN2	-1.50	0.0014	0.0112	DOWN		
56	TMEM50B	1.24	0.0008	0.0112	UP	79	MTSS2	-1.54	0.0013	0.0112	DOWN		
57	DOP1A	1.23	0.0002	0.0074	UP	80	SPATA24	-1.54	0.0071	0.0193	DOWN		
58	ZHX1	1.22	0.0344	0.0397	UP	81	LZTS3	-1.55	0.0016	0.0112	DOWN		
59	IDI1	1.20	0.0257	0.0346	UP	82	MCRIP2	-1.57	0.0108	0.0229	DOWN		
60	LSM11	1.17	0.0145	0.0247	UP	83	UCHL1	-1.57	0.0434	0.0460	DOWN		
61	KANK1	1.16	0.0346	0.0397	UP	84	TSTD1	-1.59	0.0297	0.0370	DOWN		
62	KDELR3	1.12	0.0055	0.0175	UP	85	ATP2B1	-1.61	0.0493	0.0496	DOWN		
63	SUPV3L1	-1.14	0.0047	0.0172	DOWN	86	ERN1	-1.62	0.0024	0.0117	DOWN		
64	ROBO3	-1.15	0.0007	0.0112	DOWN	87	BRSK1	-1.63	0.0069	0.0193	DOWN		
65	TMEM54	-1.16	0.0011	0.0112	DOWN	88	EMC9	-1.63	0.0025	0.0117	DOWN		
66	USE1	-1.20	0.0054	0.0175	DOWN	89	FGF21	-1.63	0.0448	0.0468	DOWN		
67	P3H2	-1.24	0.0182	0.0284	DOWN	90	DMWD	-1.65	0.0019	0.0112	DOWN		
68	SLC25A4	-1.26	0.0142	0.0247	DOWN	91	HES7	-1.65	0.0089	0.0206	DOWN		
69	FUOM	-1.28	0.0010	0.0112	DOWN	92	APBA2	-1.68	0.0115	0.0231	DOWN		

N	Gene Symbol	Log2FC			
		(CAF/NF) mean	pvalue	FDR	Regulation
93	TMEM156	-1.68	0.0163	0.0268	DOWN
94	H1-0	-1.70	0.0049	0.0172	DOWN
95	SIX2	-1.71	0.0055	0.0175	DOWN
96	TP53	-1.71	0.0163	0.0268	DOWN
97	AIFM2	-1.75	0.0017	0.0112	DOWN
98	BCL2L1	-1.75	0.0016	0.0112	DOWN
99	IDNK	-1.75	0.0038	0.0161	DOWN
100	RRAD	-1.75	0.0011	0.0112	DOWN
101	SNTB1	-1.76	0.0255	0.0346	DOWN
102	DDIT3	-1.77	0.0129	0.0239	DOWN
103	RAB33A	-1.77	0.0020	0.0112	DOWN
104	GADD45A	-1.83	0.0383	0.0427	DOWN
105	GSTO2	-1.84	0.0203	0.0305	DOWN
106	REEP2	-1.84	0.0115	0.0231	DOWN
107	CDKN3	-1.85	0.0470	0.0479	DOWN
108	ETV5	-1.86	0.0074	0.0196	DOWN
109	ITPR1	-1.86	0.0244	0.0342	DOWN
110	LYL1	-1.86	0.0122	0.0233	DOWN
111	DNAJA4	-1.88	0.0023	0.0117	DOWN
112	UNC5B	-1.88	0.0048	0.0172	DOWN
113	CYB5R2	-1.89	0.0279	0.0357	DOWN
114	PECR	-1.91	0.0119	0.0233	DOWN
115	CTPS1	-1.93	0.0316	0.0383	DOWN

N	Gene Symbol	Log2FC			
		(CAF/NF) mean	pvalue	FDR	Regulation
116	FAM24B	-1.94	0.0120	0.0233	DOWN
117	DLL3	-1.97	0.0006	0.0112	DOWN
118	TRIB3	-1.99	0.0146	0.0247	DOWN
119	CLDN7	-2.02	0.0134	0.0242	DOWN
120	SDSL	-2.06	0.0027	0.0124	DOWN
121	UBE2S	-2.06	0.0088	0.0205	DOWN
122	AJUBA	-2.14	0.0412	0.0445	DOWN
123	PODXL2	-2.14	0.0123	0.0233	DOWN
124	MROH8	-2.15	0.0018	0.0112	DOWN
125	CALHM6	-2.17	0.0387	0.0427	DOWN
126	ZP3	-2.17	0.0261	0.0346	DOWN
127	KCNG1	-2.20	0.0044	0.0167	DOWN
128	PRR11	-2.20	0.0468	0.0479	DOWN
129	NUDT14	-2.22	0.0117	0.0233	DOWN
130	RAB39B	-2.22	0.0095	0.0212	DOWN
131	SH3BGR	-2.22	0.0397	0.0435	DOWN
132	SLC7A5	-2.22	0.0092	0.0208	DOWN
133	TMEM255B	-2.30	0.0402	0.0437	DOWN
134	PLK1	-2.32	0.0459	0.0477	DOWN
135	DPYSL4	-2.33	0.0348	0.0397	DOWN
136	FRY	-2.33	0.0081	0.0203	DOWN
137	HES6	-2.37	0.0012	0.0112	DOWN
138	RASIP1	-2.38	0.0073	0.0195	DOWN

N	Gene Symbol	Log2FC	pvalue	FDR	Regulation
		(CAF/NF) mean			
139	C2CD3	-2.48	0.0041	0.0166	DOWN
140	MFSD13A	-2.52	0.0001	0.0061	DOWN
141	CHST7	-2.54	0.0112	0.0231	DOWN
142	CCL2	-2.56	0.0374	0.0421	DOWN
143	MKX	-2.56	0.0143	0.0247	DOWN
144	C19orf81	-2.64	0.0189	0.0290	DOWN
145	CCR10	-2.68	0.0174	0.0276	DOWN
146	CDH4	-2.75	0.0175	0.0276	DOWN
147	PPME1	-2.79	0.0042	0.0166	DOWN
148	TPD52L1	-2.97	0.0137	0.0245	DOWN
149	OSCAR	-3.00	0.0104	0.0226	DOWN
150	SPX	-3.03	0.0199	0.0302	DOWN
151	NKX3-2	-3.07	0.0040	0.0163	DOWN
152	CHST2	-3.25	0.0106	0.0228	DOWN
153	CYP3A7	-3.39	0.0065	0.0190	DOWN
154	ATP1A2	-3.46	0.0323	0.0388	DOWN
155	ATF3	-3.47	0.0055	0.0175	DOWN
156	GDF15	-3.50	0.0004	0.0095	DOWN
157	B3GALT2	-3.52	0.0346	0.0397	DOWN
158	BEX1	-3.53	0.0067	0.0193	DOWN
159	C1orf115	-3.84	0.0028	0.0124	DOWN
160	UCP2	-4.20	0.0070	0.0193	DOWN
161	BEX2	-4.96	0.0011	0.0112	DOWN
