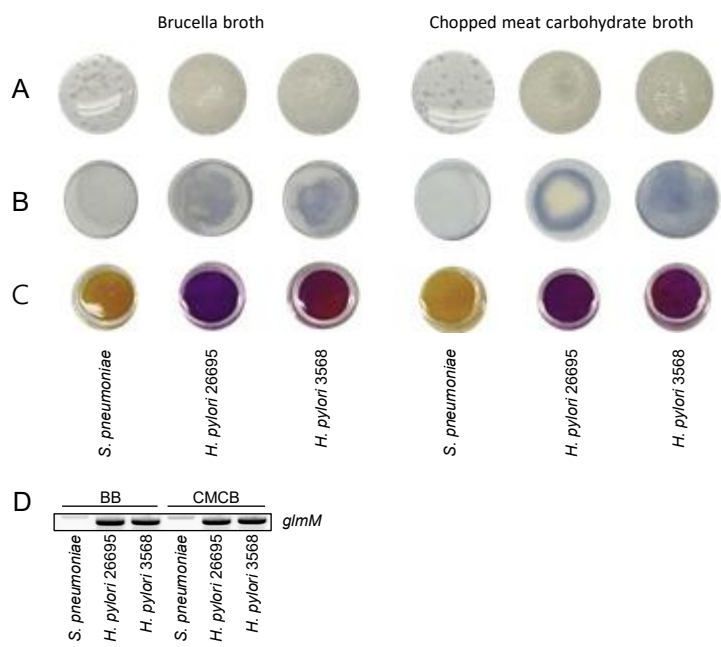




Supplementary Figure 1 Identification of *Helicobacter pylori* strains cultured in both Brucella broth and chopped meat carbohydrate broth. *Streptococcus pneumoniae* cultured in Brucella broth and chopped meat carbohydrate broth served as the negative control. Randomly selected *H. pylori* strains 26695 and 3568 were confirmed to be positive in catalase (A), oxidase (B), and urease (C) tests and PCR of *glmM* gene (D). BB, Brucella broth; CMCB, chopped meat carbohydrate broth



Supplementary Figure 2 Growth of *Helicobacter pylori* strains in 10 different broths according to initial inoculum concentration. A. *H. pylori* 26695, B. ATCC 43504, C. J99, D. strain 1832, E. strain 1865, F. strain 2891, G. strain 3233, H. strain 3424, and I. strain 3568. BB, Brucella broth; BHI, brain heart infusion broth; CB, Columbia broth; CMCB, chopped meat carbohydrate broth; EB, Eugon broth; FAB, fastidious anaerobe broth; ISB, Iso-Sensitest broth; LB, Luria Bertani broth low salt; MHB, Mueller-Hinton broth; TSB, tryptic soy broth

Supplementary Figure 2 (continue)



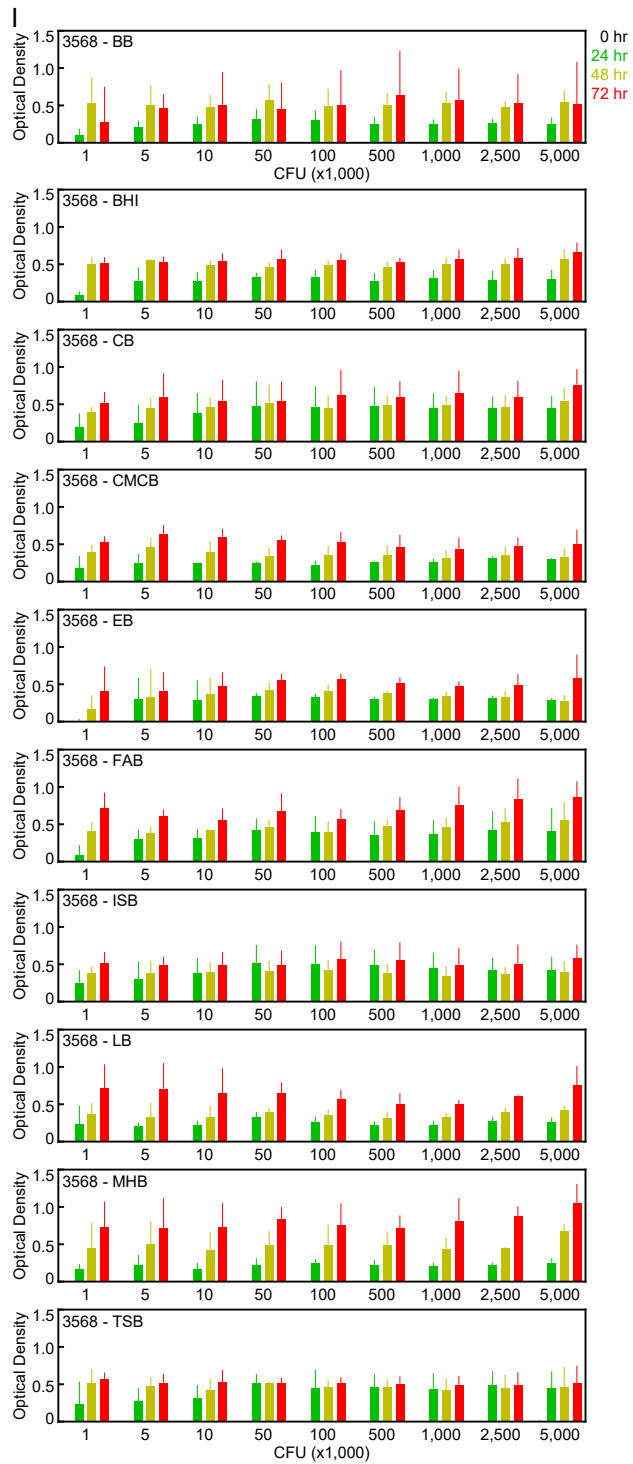
Supplementary Figure 2 (continue)



Supplementary Figure 2 (continue)



Supplementary Figure 2 (continue)



Supplementary Table 1 Compositions of the 10 liquid media used for *Helicobacter pylori* culture used in this study

	BB	BHI	CB	CM	EB	FAB	ISB	LB	MHB	TSB
	CB									
pH	7.0	7.4	7.5	7.2	7.0	7.2	7.4	7.0	7.3	7.3
Carbon source										
Dextrose (g)	1	2	2.5	4	5.5					2.5
Glucose (g)						1	2			
Maltose (g)				1						
Starch (g)				1		1	1		1.5	
Sodium pyruvate (g)						1				
Sodium succinate (g)						0.5				
Cellobioses (g)				1						
Nitrogen source										
Peptone (g)				30		23	3			
Meat peptone (g)			8							
Proteose peptone (g)		10			7.5					
Soy peptone (g)					5					
Soytone (g)										3
Tryptone (g)								10		17
Hydrolyzed casein (g)							11			
Casamino acids (g)									17.5	
Pancreatic digest of casein (g)	10		10		7.5					
Calf brain infusion (g)		7.7								
Beef heart infusion (g)		9.8								

Beef extract (g)										2
Peptic digest of animal tissue (g)	10									
Yeast extract (g)	2		5	5					5	
Inorganic salts										
Dipotassium phosphate (g)				5						2.5
Disodium hydrogen phosphate (g)								2		
Disodium phosphate (g)			2.5							
Sodium acetate (g)								1		
Sodium bisulfite (g)	0.1									
Sodium carbonate (g)				0.5						
Sodium chloride (g)	5	5	5		4	5	3	5		5
Sodium pyrophosphate (g)						0.25				
Sodium sulfite (g)					0.2					
Magnesium glycerophosphate (g)								0.2		
Magnesium sulfate (g)			0.1							
Cobaltous sulfate (g)								0.001		
Cupric sulfate (g)								0.001		
Zinc sulfate (g)								0.001		
Manganese chloride (g)								0.002		
Sodium bicarbonate (g)						0.4				
Tris (hydroxymethyl)			0.83							
aminomethane (g)										
Tris aminomethane HCl (g)			2.86							
Growth factors										
Nicotinamide (g)								0.003		
Pantothenate (g)								0.003		

Biotin (g)						0.0003
Thiamine (g)						0.00004
Vitamin K (g)					0.001	
Menadione (g)						0.001
Cyanocobalamin (g)						0.001
L-tryptophan (g)						0.02
L-arginine (g)					1	
L-cysteine (g)	0.1	0.5	0.7	0.5		0.02
Adenine (g)						0.01
Guanine (g)						0.01
Uracil (g)						0.01
Xanthine (g)						0.01
Pyridoxine (g)						0.003
Calcium gluconate (g)						0.1
Hemin (g)					0.01	
Ferrous sulfate (g)	0.02					0.001

BB: Brucella broth; BHI: brain heart infusion broth; CB: Columbia broth; CMCB: chopped meat carbohydrate broth; EB: Eugon broth; FAB: fastidious anaerobe broth; ISB: Iso-Sensitest broth; LB: Luria Bertani broth low salt; MHB: Mueller-Hinton broth; TSB: tryptic soy broth.

Supplementary Table 2 Growth analysis of nine *Helicobacter pylori* strains cultured in 10 different broths at average concentrations ranging from 1000 to 5000000 CFU/mL. The optical density (OD₆₀₀) was measured at each time point and the average of all media was estimated

<i>H. pylori</i> strains	Baseline	24 hours	48 hours	72 hours
26695	0.000 ± 0.002	0.563 ± 0.117	0.822 ± 0.219	1.062 ± 0.224
43504	0.002 ± 0.005	0.558 ± 0.128	0.807 ± 0.161	0.906 ± 0.207
J99	0.001 ± 0.002	0.464 ± 0.256	0.811 ± 0.135	0.975 ± 0.203
1832	0.001 ± 0.003	0.482 ± 0.151	0.482 ± 0.157	0.482 ± 0.172
1865	0.034 ± 0.076	0.348 ± 0.263	0.666 ± 0.209	0.775 ± 0.238
2891	0.023 ± 0.044	0.438 ± 0.195	0.507 ± 0.214	0.556 ± 0.248
3233	0.006 ± 0.010	0.325 ± 0.190	0.560 ± 0.248	0.784 ± 0.328
3424	0.049 ± 0.124	0.537 ± 0.227	0.604 ± 0.234	0.690 ± 0.225
3568	0.002 ± 0.003	0.308 ± 0.165	0.437 ± 0.149	0.587 ± 0.228

Data represent mean ± SD.

Supplementary Table 3 Detailed data (*P* value) for the comparison of growth rates of *Helicobacter pylori* strains at each time point

24 hours	43504	J99	1832	1865	2891	3233	3424	3568
26695	0.6533	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.1132	< 0.0001
43504		< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.2097	< 0.0001
J99			0.3456	< 0.0001	0.2085	< 0.0001	0.0009	< 0.0001
1832				< 0.0001	0.0056	< 0.0001	0.0018	< 0.0001
1865					< 0.0001	0.2697	< 0.0001	0.0452
2891						< 0.0001	< 0.0001	< 0.0001
3233							< 0.0001	0.2928
3424								< 0.0001

48 hours	43504	J99	1832	1865	2891	3233	3424	3568
26695	0.3901	0.5054	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
43504		0.7668	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
J99			< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
1832				< 0.0001	0.1427	< 0.0001	< 0.0001	0.0013
1865					< 0.0001	< 0.0001	0.0022	< 0.0001
2891						0.012	< 0.0001	< 0.0001
3233							0.0448	< 0.0001
3424								< 0.0001

72 hours	43504	J99	1832	1865	2891	3233	3424	3568
26695	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
43504		0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

J99		< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
1832			< 0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001
1865				< 0.0001	0.7293	< 0.0001	< 0.0001
2891					< 0.0001	< 0.0001	0.1521
3233						0.0003	< 0.0001
3424							< 0.0001

Supplementary Table 4 Growth analysis of *Helicobacter pylori* strains cultured in 10 different broths. The optical density (OD₆₀₀) was measured at each time point and the average of all strains was estimated

Media	Baseline	24 hours	48 hours	72 hours
Brucella broth	0.010 ± 0.056	0.401 ± 0.143	0.597 ± 0.213	0.722 ± 0.314
Bain heart infusion broth	0.013 ± 0.050	0.426 ± 0.300	0.662 ± 0.230	0.799 ± 0.296
Columbia broth	0.010 ± 0.045	0.495 ± 0.168	0.661 ± 0.248	0.807 ± 0.326
Chopped meat carbohydrate broth	0.014 ± 0.054	0.530 ± 0.231	0.715 ± 0.232	0.851 ± 0.283
Eugon broth	0.014 ± 0.057	0.464 ± 0.214	0.602 ± 0.213	0.686 ± 0.260
Fastidious anaerobe broth	0.014 ± 0.058	0.531 ± 0.163	0.690 ± 0.215	0.806 ± 0.225
Iso-Sensitest broth	0.014 ± 0.058	0.430 ± 0.224	0.658 ± 0.309	0.771 ± 0.357
Luria Bertani broth low salt	0.012 ± 0.054	0.318 ± 0.164	0.532 ± 0.242	0.655 ± 0.310
Mueller-Hinton broth	0.014 ± 0.053	0.357 ± 0.157	0.561 ± 0.227	0.704 ± 0.286
Tryptic soy broth	0.012 ± 0.050	0.517 ± 0.230	0.650 ± 0.211	0.774 ± 0.255

Data represent mean ± SD.

Supplementary Table 5 Detailed data (*P* value) for comparing the growth rate of *Helicobacter pylori* strains in each broth at each time point

24 hours	BHI	CB	CMCB	EB	FAB	ISB	LB	MHB	TSB
BB	0.2415	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0896	< 0.0001	0.0013	< 0.0001
BHI		0.0019	< 0.0001	0.065	< 0.0001	0.8678	< 0.0001	0.0016	0.0002
CB			0.0567	0.1574	0.0169	0.0003	< 0.0001	< 0.0001	0.2292
CMCB				0.0034	0.9561	< 0.0001	< 0.0001	< 0.0001	0.5345
EB					0.0005	0.0466	< 0.0001	< 0.0001	0.0212
FAB						< 0.0001	< 0.0001	< 0.0001	0.4392
ISB							< 0.0001	< 0.0001	< 0.0001
LB								0.0077	< 0.0001
MHB									< 0.0001

48 hours	BHI	CB	CMCB	EB	FAB	ISB	LB	MHB	TSB
BB	0.0013	0.0024	< 0.0001	0.7959	< 0.0001	0.0116	0.0018	0.072	0.0061
BHI		0.9633	0.0118	0.003	0.1663	0.8715	< 0.0001	< 0.0001	0.5492
CB			0.0135	0.0051	0.169	0.9061	< 0.0001	< 0.0001	0.5987
CMCB				< 0.0001	0.2185	0.0219	< 0.0001	< 0.0001	0.0013
EB					< 0.0001	0.0204	0.0008	0.0406	0.0129
FAB						0.1858	< 0.0001	< 0.0001	0.039
ISB							< 0.0001	< 0.0001	0.7391
LB								0.1737	< 0.0001
MHB									< 0.0001

72 hours	BHI	CB	CMCB	EB	FAB	ISB	LB	MHB	TSB
BB	0.0056	0.0036	< 0.0001	0.1693	0.0008	0.1088	0.0183	0.5092	0.0456
BHI		0.7771	0.0483	< 0.0001	0.7693	0.3471	< 0.0001	0.0004	0.319

CB	0.1128	< 0.0001	0.9686	0.2463	< 0.0001	0.0002	0.2145
CMCB		< 0.0001	0.0529	0.0064	< 0.0001	< 0.0001	0.0017
EB			< 0.0001	0.0028	0.2329	0.4682	0.0002
FAB				0.1967	< 0.0001	< 0.0001	0.1431
ISB					0.0001	0.0228	0.9152
LB						0.0708	< 0.0001
MHB							0.0046

BB: Brucella broth; BHI: brain heart infusion broth; CB: Columbia broth; CMCB: chopped meat carbohydrate broth; EB: Eugon broth; FAB: fastidious anaerobe broth; ISB: Iso-Sensitest broth; LB: Luria Bertani broth low salt; MHB: Mueller-Hinton broth; TSB: tryptic soy broth.

Supplementary Table 6 Summary of the two-way ANOVA tests evaluating the effects of broth type, incubation time, and their interactions on *Helicobacter pylori* growth

Sources of variation	Percentage of total		
	variation	<i>P</i> value	F (DFn, DFd)
Interaction (time × broth)	0.7162	< 0.0001	F (27, 9680) = 7.362
Time	62.93	< 0.0001	F (3, 9680) = 5822
Broth	1.474	< 0.0001	F (9, 9680) = 45.45

DFn: numerator degrees of Freedom; DFd: denominator degrees of freedom.