

FIRMICUTES

GRAM +

Staphylococcus aureus

GCF_000013425.1 • NCTC 8325

Genome size (Mb)	2.82
Total CDS	2767
Pseudogenes	30
tRNA	59
GC content (%)	32.87
IS elements / Mb	0.71
Release date	2006-02-18

Gram-positive coccus commonly used as a laboratory strain for studying staphylococcal biology.

FIRMICUTES

GRAM +

Streptococcus pneumoniae

GCF_001457635.1 • NCTC7465

Genome size (Mb)	2.11
Total CDS	1930
Pseudogenes	187
tRNA	58
GC content (%)	39.73
IS elements / Mb	37.90
Release date	2015-03-22

Encapsulated bacterium associated with pneumonia and meningitis.

FIRMICUTES

GRAM +

Enterococcus faecium

GCF_009734005.1 • SRR24

Genome size (Mb)	2.92
Total CDS	2722
Pseudogenes	86
tRNA	70
GC content (%)	37.88
IS elements / Mb	48.64
Release date	2020-02-05

Gut commensal that can cause hospital-acquired infections and is known for antibiotic resistance.

CAMPYLOBACTEROTA

GRAM -

Campylobacter armoricus

GCF_013372105.1 • CCUG 73571

Genome size (Mb)	1.64
Total CDS	1595
Pseudogenes	26
tRNA	46
GC content (%)	28.58
IS elements / Mb	0
Release date	2020-06-24

Campylobacter species associated with animal hosts and foodborne transmission.

PROTEOBACTERIA

GRAM -

Pseudomonas aeruginosa

GCF_000006765.1 • PAO1

Genome size (Mb)	6.26
Total CDS	5572
Pseudogenes	19
tRNA	63
GC content (%)	66.56
IS elements / Mb	1.12
Release date	2006-07-24

Opportunistic pathogen and model strain for studying biofilms and antibiotic resistance.

PROTEOBACTERIA

GRAM -

Enterobacter asburiae

GCF_007035805.1 • 17Nkhm-UP2

Genome size (Mb)	4.77
Total CDS	4400
Pseudogenes	59
tRNA	83
GC content (%)	55.79
IS elements / Mb	4.82
Release date	2019-05-14

Member of the Enterobacter cloacae complex; can be an opportunistic pathogen.

PROTEOBACTERIA

GRAM -

Acinetobacter baumannii

GCF_009035845.1 • ATCC 19606

Genome size (Mb)	4.00
Total CDS	3683
Pseudogenes	54
tRNA	74
GC content (%)	39.15
IS elements / Mb	2.25
Release date	2019-10-16

Opportunistic pathogen notable for survival on surfaces and multidrug resistance.

PROTEOBACTERIA

GRAM -

Neisseria gonorrhoeae

GCF_013030075.1 • TUM19854

Genome size (Mb)	2.17
Total CDS	1969
Pseudogenes	238
tRNA	55
GC content (%)	52.60
IS elements / Mb	37.76
Release date	2020-05-01

Causative agent of gonorrhea; a human-specific pathogen.

PROTEOBACTERIA

GRAM -

Escherichia coli

GCF_000008865.2 • O157:H7 Sakai

Genome size (Mb)	5.59
Total CDS	5155
Pseudogenes	136
tRNA	103
GC content (%)	50.48
IS elements / Mb	28.42
Release date	2018-06-08

Shiga toxin-producing E. coli associated with severe foodborne illness.

GC

Genome Clash

PROTEOBACTERIA

GRAM -

Klebsiella pneumoniae

GCF_000240185.1 • HS11286

Genome size (Mb)	5.68
Total CDS	5779
Pseudogenes	0
tRNA	62
GC content (%)	57.12
IS elements / Mb	10.38
Release date	2011-12-27

Opportunistic pathogen associated with pneumonia and bloodstream infections.

PROTEOBACTERIA

GRAM -

Escherichia coli

GCF_022354085.1 • SWHEFF_49

Genome size (Mb)	5.19
Total CDS	4748
Pseudogenes	140
tRNA	88
GC content (%)	50.62
IS elements / Mb	17.72
Release date	2022-02-22

Pathogen that causes bacillary dysentery; highly infectious.

PROTEOBACTERIA

GRAM -

Haemophilus influenzae

GCF_020736045.1 • FDAARGOS_1560

Genome size (Mb)	1.89
Total CDS	1756
Pseudogenes	50
tRNA	59
GC content (%)	38.23
IS elements / Mb	3.70
Release date	2021-11-03

Human respiratory tract bacterium that can cause invasive disease in some strains.

PROTEOBACTERIA

GRAM -

Salmonella enterica

GCF_000006945.2 • LT2

Genome size (Mb)	4.95
Total CDS	4554
Pseudogenes	39
tRNA	85
GC content (%)	52.24
IS elements / Mb	5.25
Release date	2016-01-13

Model strain for studying *Salmonella* pathogenesis and metabolism.

FIRMICUTES

GRAM +

Bacillus subtilis

GCF_000009045.1 • 168

Genome size (Mb)	4.22
Total CDS	4237
Pseudogenes	88
tRNA	86
GC content (%)	43.51
IS elements / Mb	6.64
Release date	2009-08-12

Gram-positive soil bacterium widely used as a model organism for studying sporulation and gene regulation.

FIRMICUTES

GRAM +

Clostridioides difficile

GCF_000009205.2 • 630

Genome size (Mb)	4.30
Total CDS	3806
Pseudogenes	51
tRNA	88
GC content (%)	29.06
IS elements / Mb	6.28
Release date	2017-09-29

Anaerobic spore-forming bacterium that causes antibiotic-associated diarrhea and colitis.

PROTEOBACTERIA

GRAM -

Escherichia coli

GCF_000005845.2 • K-12 substr. MG1655

Genome size (Mb)	4.64
Total CDS	4290
Pseudogenes	145
tRNA	86
GC content (%)	50.79
IS elements / Mb	24.34
Release date	2013-11-03

Non-pathogenic laboratory strain that is one of the most extensively studied organisms in biology.

PROTEOBACTERIA

GRAM -

Vibrio cholerae

GCF_000006745.1 • N16961

Genome size (Mb)	4.03
Total CDS	3485
Pseudogenes	99
tRNA	98
GC content (%)	47.49
IS elements / Mb	6.94
Release date	2001-09-18

Causative agent of cholera known for producing cholera toxin and causing severe watery diarrhea.

PROTEOBACTERIA

GRAM -

Helicobacter pylori

GCF_000008525.1 • 26695

Genome size (Mb)	1.67
Total CDS	1450
Pseudogenes	108
tRNA	36
GC content (%)	38.87
IS elements / Mb	6.00
Release date	2001-09-18

Spiral-shaped bacterium that colonizes the human stomach and is linked to ulcers and gastric cancer.

GC

Genome Clash

BACTEROIDEDES

GRAM -

Bacteroides fragilis

GCF_000025985.1 • NCTC 9343

Genome size (Mb)	5.24
Total CDS	4160
Pseudogenes	70
tRNA	73
GC content (%)	43.11
IS elements / Mb	3.82
Release date	2005-03-03

Common gut commensal that plays a role in digestion but can cause infections if displaced from the

ACTINOBACTERIA

ACID-FAST

Mycobacterium tuberculosis

GCF_000195955.2 • H37Rv

Genome size (Mb)	4.41
Total CDS	3906
Pseudogenes	30
tRNA	45
GC content (%)	65.61
IS elements / Mb	80.47
Release date	2013-02-01

Slow-growing pathogen responsible for tuberculosis and a key reference strain in TB research.

ACTINOBACTERIA

GRAM +

Rhodopseudomonas palustris CGA009

GCF_000195775.1 • CGA009

Genome size (Mb)	5.47
Total CDS	4913
Pseudogenes	51
tRNA	49
GC content (%)	65.03
IS elements / Mb	2.74
Release date	2003-12-11

Versatile photosynthetic bacterium used to study carbon and nitrogen fixation.

ACTINOBACTERIA

GRAM +

Streptomyces violaceolatus

GCF_000203835.1 • A3(2)

Genome size (Mb)	9.05
Total CDS	7996
Pseudogenes	192
tRNA	66
GC content (%)	72
IS elements / Mb	11.93
Release date	2003-05-06

Soil-dwelling bacterium famous for producing antibiotics and for its complex developmental life cycle.

CHLAMYDIOTA

GRAM -

Chlamydia trachomatis

GCF_000008725.1 • D/UW-3/CX

Genome size (Mb)	1.04
Total CDS	887
Pseudogenes	3
tRNA	37
GC content (%)	41.31
IS elements / Mb	0
Release date	2001-09-13

Obligate intracellular pathogen and leading cause of bacterial sexually transmitted infections worldwide.

MYCOPLASMATOTA

NO CELL WALL

Mycoplasma genitalium

GCF_000027325.1 • G-37

Genome size (Mb)	0.58
Total CDS	504
Pseudogenes	20
tRNA	36
GC content (%)	31.69
IS elements / Mb	0
Release date	2006-01-09

Extremely small bacterium with a minimal genome used to study the limits of cellular life.

PSEUDOMONADOTA

GRAM -

Yersinia pestis

GCF_000009065.1 • CO92

Genome size (Mb)	4.83
Total CDS	4094
Pseudogenes	217
tRNA	69
GC content (%)	47.64
IS elements / Mb	51.76
Release date	2001-10-15

Plague-causing bacterium responsible for historic pandemics.

FIRMICUTES

GRAM +

Listeria monocytogenes

GCF_000196035.1 • EGD-e

Genome size (Mb)	2.94
Total CDS	2867
Pseudogenes	6
tRNA	67
GC content (%)	37.98
IS elements / Mb	2.72
Release date	2003-05-06

Foodborne pathogen that grows at low temperatures and infects humans.

PROTEOBACTERIA

GRAM -

Legionella pneumophila

GCF_000008485.1 • Philadelphia 1

Genome size (Mb)	3.40
Total CDS	2976
Pseudogenes	23
tRNA	44
GC content (%)	38.27
IS elements / Mb	10.30
Release date	2004-09-29

Waterborne pathogen that causes Legionnaires' disease.

GC

Genome Clash

CAMPYLOBACTEROTA

GRAM -

Campylobacter jejuni

GCF_000009085.1 • NCTC 11168

Genome size (Mb)	1.64
Total CDS	1572
Pseudogenes	40
tRNA	43
GC content (%)	30.55
IS elements / Mb	14.01
Release date	2001-09-27

Leading cause of bacterial gastroenteritis worldwide.

PROTEOBACTERIA

GRAM -

Shigella flexneri

GCF_000007405.1 • 2457T

Genome size (Mb)	4.60
Total CDS	3834
Pseudogenes	674
tRNA	100
GC content (%)	50.91
IS elements / Mb	111.32
Release date	2003-04-23

Highly infectious pathogen causing bacillary dysentery.

FIRMICUTES

GRAM +

Clostridium botulinum

GCF_000022765.1 • Kyoto

Genome size (Mb)	4.16
Total CDS	3783
Pseudogenes	78
tRNA	81
GC content (%)	28.21
IS elements / Mb	2.89
Release date	2009-04-15

Bacterium that produces botulinum toxin - one of the most potent known.

PROTEOBACTERIA

GRAM -

Haemophilus influenzae

GCF_000027305.1 • Rd KW20

Genome size (Mb)	1.83
Total CDS	1604
Pseudogenes	117
tRNA	57
GC content (%)	38.15
IS elements / Mb	7.10
Release date	1999-12-22

Model strain of a human respiratory tract bacterium.

PROTEOBACTERIA

GRAM -

Rickettsia rickettsii

GCF_000018225.1 • Sheila Smith

Genome size (Mb)	1.26
Total CDS	1290
Pseudogenes	102
tRNA	34
GC content (%)	32.47
IS elements / Mb	9.54
Release date	2007-10-02

Tick-borne intracellular pathogen causing Rocky Mountain spotted fever.

PROTEOBACTERIA

GRAM -

Coxiella burnetii RSA 493

GCF_000007765.1 • RSA 493

Genome size (Mb)	2.03
Total CDS	1853
Pseudogenes	0
tRNA	42
GC content (%)	42.60
IS elements / Mb	14.76
Release date	2005-07-22

Highly infectious intracellular pathogen that causes Q fever.

FIRMICUTES

GRAM +

***Staphylococcus aureus***

GCF_000013465.1 • FPR3757

Genome size (Mb)	2.92
Total CDS	2774
Pseudogenes	82
tRNA	52
GC content (%)	32.69
IS elements / Mb	12.00
Release date	2006-02-11

Community-associated MRSA strain linked to severe skin infections.

GC

Genome Clash

GC

Genome Clash