ATCC®

Quantitative Nucleic Acids

SKIP IN VITRO WITH ATCC® GENUINE NUCLEICS

The extraction, preparation, and verification of nucleic acids can often require extensive amounts of time, labor, and expense. To save you time and money, ATCC has developed stabilized, quantitative nucleic acids for use in inclusivity/exclusivity testing, establishing limits of detection, and validating or comparing test methods. Our portfolio of quantitative products includes:

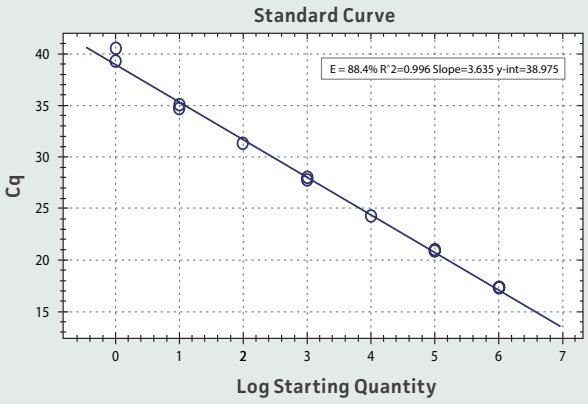
- **Synthetic nucleic acids** – DNA and RNA synthetically manufactured under ISO 13485 guidance to include key target regions from select bacterial and viral strains
- **Genomic nucleic acids** – Whole genome preparations aseptically prepared from minimally passaged ATCC® Genuine Cultures
- **Certified reference materials** – Genomic DNA produced under an ISO 17034 accredited process to confirm identity, well-defined characteristics, and an established chain of custody

So, skip in vitro and let ATCC do the work for you! Trust ATCC Genuine Nucleics for your laboratory's molecular needs, and get your research started today.

PUT ATCC GENUINE NUCLEICS TO WORK FOR YOU

ATCC nucleic acids can be used for assay development, verification, validation, monitoring of day-to-day test variation, and lot-to-lot performance of molecular-based assays. Quantitative formats also allow for the generation of a standard curve to determine microbial load.

To learn more about ATCC nucleic acid research, visit us online at www.atcc.org.



Standard curve generated using the Synthetic Dengue virus (DENV) type 4 molecular standard.

SYNTHETIC NUCLEIC ACIDS

ATCC performs extensive research on select organisms, and works with collaborators to identify key target regions within the genome that are compatible with primers used in molecular assays. Multiple sequence alignment allows for the development of a consensus sequence that is used to synthetically build the finished product.

- Eliminate the need to culture microorganisms
- Use in a BSL-1 facility
- No shipping restrictions
- Manufactured under ISO 13485 guidance
- Quantified using Droplet Digital™ PCR (ddPCR™)

Each preparation is extensively tested to ensure product identity, stability, quantity, and functionality with molecular applications. What's more, each DNA or RNA preparation is stabilized using a proprietary stabilization matrix to ensure consistent results, run after run.

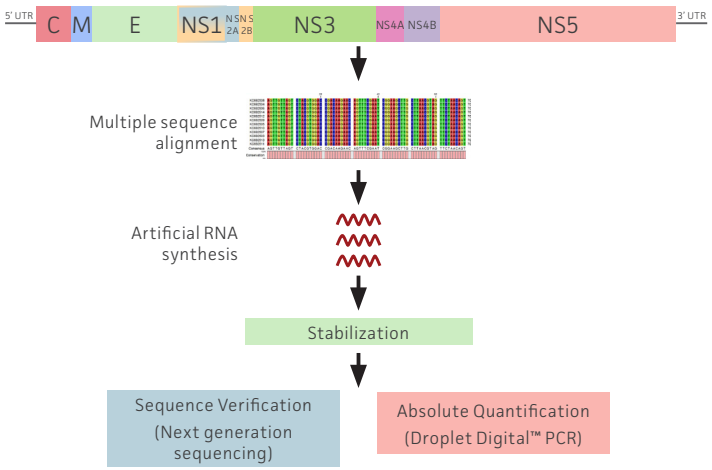


Table 1: Quantitative Synthetic Nucleic Acids

ATCC® No.	Organism	Source Information	Research Applications
VR-3283SD™	African swine fever virus	Fragments from B646L, A489, 505-2R, C717R, B962L, B119L, G1340L and D1133L genomic regions.	Agricultural Research
VR-3249SD™	BK virus	Full length genome of BK virus derived from a plasmid clone	Blood-borne Disease Research
VR-3233SD™	Hepatitis C virus	Fragments from 5'UTR and X-tail region (3'UTR)	Blood-borne Disease Research
VR-3247SD™	Human gammaherpesvirus 4 (Epstein-Barr virus)	Fragments from LMP2, BNRF-1, EBER-1, BAMH1W, EBNA-2, BHRF-1, EBNA-1 Region, BXLF-1, BALF-5, and LMP-1	Blood-borne Disease Research
VR-3261SD™	Human herpesvirus 8	Fragments from the minor capsid protein (ORF 26) and the latency-associated nuclear antigen (LANA or ORF 73)	Blood-borne Disease Research
VR-3237SD™	Sapovirus	Fragments from the RNA-dependent RNA polymerase, VP1, and polyprotein regions.	Digestive System Disease Research
VR-3238SD™	Astrovirus	Fragments from ORF1a, ORF1b, ORF2, and 3' UTR regions	Digestive System Disease Research
PRA-3000SD™	*Cyclospora cayetanensis*	Full 18S rRNA gene sequence, and full ITS1 and ITS2 sequences	Digestive System Disease Research
PRA-3011SD™	*Cryptosporidium hominis*	Fragments from 18s rRNA, heat shock protein 70 (hsp70), COWP, GP60, dnaJ-like protein, and LIB13 regions	Digestive System Disease Research
PRA-3007SD™	*Dientamoeba fragilis*	Fragmetns from the 18S ribosomal RNA, internal transcribed spacer 1 (ITS1), and 5.8S ribosomal RNA regions	Digestive System Disease Research
PRA-3006SD™	*Giardia lamblia*	Fragments from the 18S ribosomal RNA, beta-giardin, triosephosphate isomerase, and glutamate dehydrogenase regions.	Digestive System Disease Research
VR-3257SD™	Hepatitis A virus	Fragments from the 5' untranslated region, viral capsid proteins (VP1- 4), self-cleaving peptide 2A, proteinase 3C, and 3D RNA polymerase.	Digestive System Disease Research
VR-3258SD™	Hepatitis E virus	Fragments from the 5' untranslated region, methyl transferase, Y domain, X domain, helicase, RNA-directed RNA polymerase, and open reading frames 2 and 3 (ORF2 and ORF3)	Digestive System Disease Research
VR-3260SD™	Human parechovirus 3	Fragments from the 5'UTR and the viral protein VP1.	Digestive System Disease Research
VR-3255SD™	Murine Norovirus	Fragments from the 5'UTR, NS1/2, NS5, NS6, NS7, Gp1, VF1, GP2, GP3, and 3'UTR	Digestive System Disease Research
VR-3234SD™	Norovirus GI	Fragments from the RNA-dependent RNA polymerase and VP1 regions	Digestive System Disease Research
VR-3235SD™	Norovirus GII	Fragments from the RNA-dependent RNA polymerase, VP1, and VP2 regions	Digestive System Disease Research
VR-3264SD™	Human herpesvirus 6	Fragments from U31, U38, U57, U65/U66, U67, U90, and U94	Neurological Disease Research
VR-3265SD™	Human herpesvirus 7	Fragments from U10, U31, U38, U39, U42, and U57 regions	Neurological Disease Research
BAA-4009SD™	*Mycobacterium leprae*	Fragments from the RLEP, Ag85B, 16S rRNA, and *rpoB* regions	Neurological Disease Research
VR-3270SD™	Monkeypox virus	Fragments from J2L, D14L, F3L, F8L, A27L, A29L, B6R, B7R, and N3R regions	Pox Disease Research
VR-3436SD™	Avian Influenza A virus (H5N1)	One construct includes the full genes for the HA and NP regions. The other construct includes the full genes for the NA, M1/M2, and NEP/NS1 regions.	Respiratory Disease Research
VR-3439SD™	Avian Influenza A virus (H5N6)	One construct includes the full genes for the HA and NP regions. The other construct includes the full genes for the NA, M1/M2, and NEP/NS1 regions.	Respiratory Disease Research
VR-3438SD™	Avian Influenza A virus (H7N7)	One construct includes the full genes for the HA and NP regions. The other construct includes the full genes for the NA, M1/M2, and NEP/NS1 regions.	Respiratory Disease Research
VR-3437SD™	Avian Influenza A virus (H7N9)	One construct includes the full genes for the HA and NP regions. The other construct includes the full genes for the NA, M1/M2, and NEP/NS1 regions.	Respiratory Disease Research
VR-3440SD™	Avian Influenza A virus (H9N2)	One construct includes the full genes for the HA and NP regions. The other construct includes the full genes for the NA, M1/M2, and NEP/NS1 regions.	Respiratory Disease Research
VR-3282SD™	Avian paramyxovirus (Newcastle disease virus)	Fragments from the M (Matrix protein), F (Fusion protein), and L (Large RNA polymerase protein) gene regions and targets Class II NDV (velogenic assays favored).	Respiratory Disease Research
BAA-4000SD™	*Coxiella burnetii*	Fragments from the com1, icd, transposase (IS1111A), gyrA, and sodB regions	Respiratory Disease Research
VR-3251SD™	Human bocavirus	Fragments from the 5'UTR, NS1, NP1, VP1, VP2, and 3' UTR genes.	Respiratory Disease Research
VR-3262SD™	Human coronavirus strain HKU1	Fragments from from the acidic tandem repeat region, growth factor-like protein, NTPase/helicase domain, RNA-dependent RNA polymerase, spike, and nucleocapsid regions	Respiratory Disease Research

Table 1: Quantitative Synthetic Nucleic Acids

ATCC® No.	Organism	Source Information	Research Applications
VR-3263SD™	Human coronavirus strain NL63	Fragments from NSP3 (ORF 1A), Rdrp (nsp12), NTPase (nsp13), nsp16, spike protein, nucleocapsid, and 3' UTR	Respiratory Disease Research
VR-3250SD™	Human metapneumovirus (hMPV)	Fragments from the N, P, M, F, and L genes	Respiratory Disease Research
VR-3386SD™	Influenza A virus (H1N1)	One construct includes the full genes for the HA and NP regions. The other construct includes the full genes for the NA, M1/M2, and NEP/NS1 regions.	Respiratory Disease Research
VR-3388SD™	Influenza A virus (H1N1)pdm09	One construct includes the full genes for the HA and NP regions. The other construct includes the full genes for the NA, M1/M2, and NEP/NS1 regions.	Respiratory Disease Research
VR-3387SD™	Influenza A virus (H3N2)	One construct includes the full genes for the HA and NP regions. The other construct includes the full genes for the NA, M1/M2, and NEP/NS1 regions.	Respiratory Disease Research
VR-3385SD™	Influenza B Virus (Victoria lineage)	One construct includes the full genes for the HA and NP regions. The other construct includes the full genes for the NA, M1/M2, and NEP/NS1 regions.	Respiratory Disease Research
VR-3384SD™	Influenza B Virus (Victoria lineage)	One construct includes the full genes for the HA and NP regions. The other construct includes the full genes for the NA, M1/M2, and NEP/NS1 regions.	Respiratory Disease Research
VR-3248SD™	Middle East respiratory syndrome coronavirus (MERS-CoV)	Fragments from the ORF1ab, ORF5, upper envelope (upE), ORF8b, nucleocapsid (N) protein gene, and 3' UTR regions	Respiratory Disease Research
VR-3281SD™	Parvovirus B19	Fragments from VP1, VP2, and NS1 regions. This construct targets genotype 1.	Respiratory Disease Research
MYA-5006SD™	*Pneumocystis jirovecii*	Fragments from the mtLSU rRNA, mtSSU rRNA, DHPS, MSG, KEX-1, and Beta-tubulin regions.	Respiratory Disease Research
VR-3276SD™	Severe acute respirtory syndrome-related coronavirus 2 (SARS-CoV-2)	Fragments from ORF 1ab (including ORF-1b-nsp14 and RdRp), Envelope, and Nucleocapsid regions.	Respiratory Disease Research
VR-3277SD™	Severe acute respirtory syndrome-related coronavirus 2 (SARS-CoV-2)	Fragment from the 5' Glycoprotein (Spike) region	Respiratory Disease Research
VR-3278SD™	Severe acute respirtory syndrome-related coronavirus 2 (SARS-CoV-2)	Fragment from the 3' Glycoprotein (Spike) region	Respiratory Disease Research
VR-3279SD™	Severe acute respirtory syndrome-related coronavirus 2 (SARS-CoV-2)	Fragment from the nsp9 and nsp12 (RdRp) regions.	Respiratory Disease Research
VR-3280SD™	Severe acute respirtory syndrome coronavirus [2003] (SARS-CoV)	Fragment from the nsp9 (RdRp), nsp11 and N regions.	Respiratory Disease Research
BAA-4001SD™	*Chlamydia trachomatis* LGV Type 1	Fragments from MOMP, 16S rRNA, pmpH, dnaB, putative virulence plasmid integrase regions, and conserved hypothetical virulence plasmid protein	Reproductive Health Research
BAA-4002SD™	*Chlamydia trachomatis* LGV Type 2	Fragments from MOMP, 16S rRNA, pmpH and dnaB regions	Reproductive Health Research
BAA-4003SD™	*Chlamydia trachomatis* LGV Type 3	Fragments from MOMP, 16S rRNA, pmpH and dnaB regions	Reproductive Health Research
VR-3351SD™	Human immunodeficiency virus 1 (HIV-1)	Fragments from the 5' LTR, gag gene, pol gene (including protease, reverse transcriptase, and integrase regions), tat gene, rev gene, and nef gene.	Reproductive Health Research & Blood-borne Disease Research
VR-3259SD™	Human T-cell leukemia virus 2 (HTLV-2)	Proviral genome sequence of HTLV-2 except the long terminal repeats (LTRs)	Reproductive Health Research & Blood-borne Disease Research
VR-3232SD™	Hepatitis B virus	Fragments from the highly conserved precore, core, P, S and X regions	Reproductive Health Research & Blood-borne Disease Research
VR-3266SD™	Human immunodeficiency virus 2 (HIV-2)	Fragments from the envelope (ENV), group specific antigen (GAG) and DNA polymerase (POL) regions	Reproductive Health Research & Blood-borne Disease Research
VR-3240SD™	Human papillomavirus 16	Full length genome of HPV 16 derived from a plasmid clone	Reproductive Health Research
VR-3241SD™	Human papillomavirus 18	Full length genome of HPV 18 derived from a plasmid clone	Reproductive Health Research
VR-3256SD™	Human papillomavirus 31	Full length genome of HPV 31 derived from a plasmid clone	Reproductive Health Research
BAA-2641SD™	*Mycoplasma genitalium*	Fragments from the 16S gene, mgpA, and gap	Reproductive Health Research
BAA-2642SD™	*Treponema pallidum*	Fragments from the polA, 23S gene, 16S gene, flaA, 47kDa protein gene, and bmp	Reproductive Health Research
BAA-4004SD™	*Ureaplasma urealyticum*	Fragments from 16S rRNA, ureA, intergenic region 1, ureB, intergenic region 2, ureC, ureG, and MBA regions	Reproductive Health Research

Table 1: Quantitative Synthetic Nucleic Acids

ATCC® No.	Organism	Source Information	Research Applications
PRA-3008SD	*Babesia canis*	Partial sequence of 18S ribosomal RNA	Vector-borne Disease Research
VR-3272SD™	Bourbon virus	Fragments from the PB1 and NP regions	Vector-borne Disease Research
VR-3246SD™	Chikungunya virus	Fragments from the 5' UTR, nsP1, nsP2, nsP3, nsP4, E2, and E1 genes	Vector-borne Disease Research
VR-3228SD™	Dengue virus type 1	Fragments from the capsid, membrane, and envelope regions	Vector-borne Disease Research
VR-3229SD™	Dengue virus type 2	Fragments from the capsid, membrane, and envelope regions	Vector-borne Disease Research
VR-3230SD™	Dengue virus type 3	Fragments from the capsid, membrane, and envelope regions	Vector-borne Disease Research
VR-3231SD™	Dengue virus type 4	Fragments from the capsid, membrane, and envelope regions	Vector-borne Disease Research
VR-3239SD™	Eastern equine encephalitis virus	Fragments from the capsid, NSP1, NSP3, 3' UTR, E1 envelope glycoprotein, and the E2 envelope glycoprotein regions	Vector-borne Disease Research
PRA-3001SD™	*Plasmodium malariae*	Fragments from the 18S rRNA gene, UTR, cyclooxygenase 1 and 3 (Cox1 & Cox3), and Cytochrome B (Cytb) region	Vector-borne Disease Research
PRA-3004SD™	*Plasmodium vivax*	Fragments from 18s rRNA, mitochondrial DNA, cox3, cox1, cytB, and Aspartic protease PM4 regions	Vector-borne Disease Research
VR-3273SD™	Powassan virus lineage I	Fragments from the E, NS1, NS5, and 3' UTR regions.	Vector-borne Disease Research
VR-3275SD™	Powassan virus lineage II	Fragments from the E, NS1, NS5, and 3' UTR regions.	Vector-borne Disease Research
VR-3254SD™	Rift Valley fever virus	Fragments from the long, medium, and small genome segments, including the Gn, Nss, and Nsm genes	Vector-borne Disease Research
VR-3236SD™	Saint Louis encephalitis virus	Fragments from the NS1 gene, premembrane, envelope, NS5 gene, and 3' UTR regions	Vector-borne Disease Research
PRA-3012SD™	*Trypanosoma cruzi*	Fragments from 18S rRNA, Kinetoplast minicircle, and Lathosterol oxidase (TcSC5D) regions, and a full-length satellite sequence.	Vector-borne Disease Research
VR-3274SD™	West Nile virus	Fragments from the 5' UTR, capsid, anchored capsid protein, membrane glycoprotein precursor (prM), Envelope protein (ENV), Nonstructural protein NS1, Nonstructural protein NS2A, Nonstructural protein NS3, RNA-dependent RNA polymerase NS5 and 3' UTR regions.	Vector-borne Disease Research
VR-3253SD™	Yellow fever virus	Fragments from the capsid protein C, Pre-M, Envelope protein, NS1, NS2A, NS3, and NS5 regions.	Vector-borne Disease Research
VR-3252SD™	Zika virus	Fragments from the membrane glycoprotein precursor M, Envelope, NS1, NS2B, NS3, NS4B, and NS5 regions	Vector-borne Disease Research
VR-3268SD™	Lassa virus	Fragments from 5' UTR and glycoprotein regions	Zoonotic Disease Research
VR-3269SD™	Nipah virus	Complete nucleocapsid protein and fragments from the matrix and glycoprotein regions	Zoonotic Disease Research

GENOMIC NUCLEIC ACIDS

ATCC genomic nucleic acids are whole genome preparations aseptically prepared from minimally passaged ATCC® Genuine Cultures. Each preparation is supported by stringent quality control testing to ensure product authenticity and functionality, including one or more of the following analyses:

- Agarose gel electrohoresis to ensure integrity
- Spectrophotometry to evaluate purity
- Droplet Digital™ PCR (ddPCR™) to calculate concentration
- PCR to confirm functional activity
- Sequencing and short tandem repeat analyses confirm species identity

Further, each of our products is manufactured under ISO 9001 certified and ISO/IEC 17025 accredited processes, so you can trust your results and reproduce your data – every time.

Table 2: Quantitative Genomic Nucleic Acids

ATCC® No.	Organism	Source Information	Research Applications
1015DQ™	*Aspergillus niger*		Agricultural Research
27374DQ™	*Campylobacter fetus* subsp. *fetus*	Brain of sheetp *fetus*	Agricultural Research
17752DQ™	*Megasphaera elsdenii*		Agricultural Research
VR-552DQ™	Canid herpesvirus 1	Respiratory tract of a dog	Animal Disease Research
9649DQ™	*Lactobacillus delbrueckii* subsp. *delbrueckii*	Sour grain mash	Biotechnology Research
17023DQ™	*Rhodobacter sphaeroides*		Biotechnology Research
VR-538DQ™	Human herpesvirus 5	Adenoid tissue from 7-year-old female	Blood-related Disease Research
VR-1367DQ™	Human herpesvirus 3 (Varicella-zoster virus)	Vesicular fluid from child with chickenpox; Georgia	Blood-related Disease Research
700532DQ™	*Neisseria meningitidis*	Patient with meningococcal *septic*aemia	Blood-related Disease Research
12453DQ™	*Proteus mirabilis*		Blood-related Disease Research
25285DQ™	*Bacteroides fragilis*	Appendix abscess	Digestive System Disease Research
50608DQ™	*Blastocystis hominis*	Isolated 1986	Digestive System Disease Research
33559DQ™	*Campylobacter coli*	Pig feces	Digestive System Disease Research
33291DQ™	*Campylobacter jejuni* subsp. *jejuni*	Feces	Digestive System Disease Research
33560DQ™	*Campylobacter jejuni* subsp. *jejuni*	Bovine feces	Digestive System Disease Research
700819DQ™	*Campylobacter jejuni* subsp. *jejuni*	Human feces	Digestive System Disease Research
750DQ™	*Candida tropicalis*	Patient with bronchomycosis	Digestive System Disease Research
66029DQ™	*Candida tropicalis*		Digestive System Disease Research
8090DQ™	*Citrobacter freundii*		Digestive System Disease Research
9689DQ™	*Clostridioides difficile*		Digestive System Disease Research
43598DQ™	*Clostridioides difficile*	Human feces, asymptomatic neonate, Belgium	Digestive System Disease Research
BAA-1382DQ™	*Clostridioides difficile*	Clinical isolate; Switzerland	Digestive System Disease Research
BAA-1805DQ™	*Clostridioides difficile*	Clinical isolate	Digestive System Disease Research
BAA-1870DQ™	*Clostridioides difficile*		Digestive System Disease Research
13124DQ™	*Clostridioides perfringens*	Clinical isolate, Switzerland	Digestive System Disease Research
PRA-67DQ™	*Cryptosporidium parvum*	Animal feces; 2002	Digestive System Disease Research
30459DQ™	*Entamoeba histolytica*	Colonic biopsy of rectal ulcer from adult human male with amebic dysentery; Mexico City, Mexico, 1967	Digestive System Disease Research
29212DQ™	*Enterococcus faecalis*	Urine	Digestive System Disease Research
51299DQ™	*Enterococcus faecalis*	Peritoneal fluid, St. Louis, Missouri, US	Digestive System Disease Research
700802DQ™	*Enterococcus faecalis*	Human blood, patient, St. Louis, Missouri, US, 1987	Digestive System Disease Research
700221DQ™	*Enterococcus faecium*	Human feces, Connecticut	Digestive System Disease Research
8739DQ™	*Escherichia coli*	Feces	Digestive System Disease Research
35401DQ™	*Escherichia coli*	Feces	Digestive System Disease Research
43888DQ™	*Escherichia coli*	Feces	Digestive System Disease Research
43893DQ™	*Escherichia coli*	Feces	Digestive System Disease Research
11229DQ™	*Escherichia coli*		Digestive System Disease Research
10798DQ™	*Escherichia coli*	Feces from diphtheria convalescent	Digestive System Disease Research

Table 2: Quantitative Genomic Nucleic Acids

ATCC® No.	Organism	Source Information	Research Applications
25922DQ™	*Escherichia coli* O6	Clinical isolate	Digestive System Disease Research
43895DQ™	*Escherichia coli* O157:H7	Raw hamburger meat implicated in a hemorrhagic *coli*tis outbreak	Digestive System Disease Research
700926DQ™	*Escherichia coli*	Derived from parent strain W1485 by acridine orange curing of the F plasmid	Digestive System Disease Research
700928DQ™	*Escherichia coli*	Human clinical specimen, blood and urine from a women with acute pyelonephritis, Baltimore, Maryland	Digestive System Disease Research
BAA-2192DQ™	*Escherichia coli* O145:Nonmotile	Human stool, South Dakota, USA	Digestive System Disease Research
BAA-2193DQ™	*Escherichia coli* O45:H2	Stool, Maine	Digestive System Disease Research
BAA-2196DQ™	*Escherichia coli* O26:H11	Stool, Michigan	Digestive System Disease Research
BAA-2215DQ™	*Escherichia coli* O103:H11	Idaho	Digestive System Disease Research
BAA-2219DQ™	*Escherichia coli* O121:H19	Human stool, Virginia	Digestive System Disease Research
BAA-2326DQ™	*Escherichia coli* O104:H4	Stool sample from patient with hemolytic uremic syndrome, 2011	Digestive System Disease Research
BAA-2440DQ™	*Escherichia coli* O111	Human	Digestive System Disease Research
27766DQ™	*Faecalibacterium prausnitzii*	Human feces	Digestive System Disease Research
30888DQ™	*Giardia intestinalis*	Human female, Portland, OR, 1971	Digestive System Disease Research
43504DQ™	*Helicobacter pylori*	Gastric antrum	Digestive System Disease Research
700392DQ™	*Helicobacter pylori*	Stomach of a human patient with gastritis; UK	Digestive System Disease Research
VR-930DQ™	Human adenovirus 41	Feces from child with gastroenteritis, Netherlands, 1973	Digestive System Disease Research
VR-850DQ™	Human Coxsackievirus A 21	Stool from male with paralytic illness, California	Digestive System Disease Research
VR-30DQ™	Human Coxsackievirus B3	Stool from febrile patient with minor illness	Digestive System Disease Research
VR-1775DQ™	Human Enterovirus 71	Stool sample from 2-month-old male with aseptic meningitis	Digestive System Disease Research
VR-931DQ™	Human adenovirus 40	Feces, infantile gastroenteritis, Netherlands, 1979	Digestive System Disease Research
BAA-679DQ™	*Listeria monocytogenes*	Tissue, animal - rabbit, Cambridge United Kingdom, 1924	Digestive System Disease Research
25830DQ™	*Morganella morganii* subsp. *morganii*	Patient with summer diarrhea	Digestive System Disease Research
BAA-968D™	*Mycobacterium avium* subsp. *paratuberculosis*	Animal feces; Wisconsin, 1990	Digestive System Disease Research
14029DQ™	*Plesiomonas shigelloides*		Digestive System Disease Research
VR-824DQ™	Reovirus 3	Child with diarrhea	Digestive System Disease Research
VR-2018DQ™	Rotavirus A	Diarrhea stool from patient positive for rotavirus	Digestive System Disease Research
VR-3391DQ™	Rotavirus A	Human infant, Bethesda, Maryland	Digestive System Disease Research
13076DQ™	*Salmonella enterica* subsp. *enterica* serovar Enteritidis		Digestive System Disease Research
13311DQ™	*Salmonella enterica* subsp. *enterica* serovar Typhimurium	Feces, food poisoning	Digestive System Disease Research
14028DQ™	*Salmonella enterica* subsp. *enterica* serovar Typhimurium	Tissue from pools of heart and liver from 4-week-old chickens	Digestive System Disease Research
700720DQ™	*Salmonella enterica* subsp. *enterica* serovar Typhimurium	Wild type strain isolated from a natural source; 1948	Digestive System Disease Research
12022DQ™	*Shigella flexneri*		Digestive System Disease Research
29903DQ™	*Shigella flexneri*		Digestive System Disease Research
25931DQ™	*Shigella sonnei*	Feces	Digestive System Disease Research
29930DQ™	*Shigella sonnei*		Digestive System Disease Research
BAA-611DQ™	*Streptococcus agalacitae*	Clinical specimen, Human	Digestive System Disease Research
PRA-310DQ™	*Toxoplasma gondii*	Derived from in vivo RH strain ATCC 50174	Digestive System Disease Research
14035DQ™	*Vibrio cholerae*		Digestive System Disease Research
39315DQ™	*Vibrio cholerae*	Stool from cholera patient, Bangladesh	Digestive System Disease Research
17802DQ™	*Vibrio parahaemolyticus*	Shirasu food poisoning	Digestive System Disease Research
27562DQ™	*Vibrio vulnificus*	Human blood, Florida	Digestive System Disease Research
9610DQ™	*Yersinia enterocolitica* subsp. *enterocolitica*	Tissue; glanders-like infection of the face	Digestive System Disease Research
23715DQ™	*Yersinia enterocolitica* subsp. *enterocolitica*	Blood, petechiae, from anterior chamber of eye	Digestive System Disease Research

Table 2: Quantitative Genomic Nucleic Acids

ATCC® No.	Organism	Source Information	Research Applications
10231DQ™	*Candida albicans*	Man with bronchomycosis	Epidermal Disease Research
22019DQ™	*Candida parapsilosis*	Case of sprue, Puerto Rico	Epidermal Disease Research
6919DQ™	*Cutibacterium acnes*	Facial acne	Epidermal Disease Research
VR-1432DQ™	Human enterovirus 71	Vesicular fluid from an adult female with hand, foot, and mouth disease, Wuhan, China.	Epidermal Disease Research
VR-1467DQ™	Human herpesvirus 6B	Peripheral blood lymphocytes from a 36 year-old male AIDS patient, Zaire, Africa	Epidermal Disease Research
47085DQ™	*Pseudomonas aeruginosa*		Epidermal Disease Research
9027DQ™	*Pseudomonas paraeruginosa*	Outer ear infection	Epidermal Disease Research
VR-315DQ™	Rubella virus	Throat washings from Army recruit	Epidermal Disease Research
6538DQ™	*Staphylococcus aureus*	Human lesion	Epidermal Disease Research
25923DQ™	*Staphylococcus aureus* subsp. *aureus*	Clinical Isolate	Epidermal Disease Research
29213DQ™	*Staphylococcus aureus* subsp. *aureus*	Wound	Epidermal Disease Research
43300DQ™	*Staphylococcus aureus* subsp. *aureus*	Clinical isolate, Kansas	Epidermal Disease Research
700699DQ™	*Staphylococcus aureus* subsp. *aureus*	Isolated from pus and debrided tissue at surgical incision in sternum of 4 month-old infant; Japan, 1996	Epidermal Disease Research
BAA-1556DQ™	*Staphylococcus aureus* subsp. *aureus*	Wrist abcess, 36-year-old HIV+ man with history of IV drug use	Epidermal Disease Research
BAA-1717DQ™	*Staphylococcus aureus* subsp. *aureus*	From adolescent patient with severe sepsis syndrome; Texas Children's Hospital	Epidermal Disease Research
BAA-1718DQ™	*Staphylococcus aureus* subsp. *aureus*	From a 12-year-old white female with a buttock abscess	Epidermal Disease Research
12228DQ™	*Staphylococcus epidermidis*		Epidermal Disease Research
19615DQ™	*Streptococcus pyogenes*	Pharynx of child following episode of sore throat.	Epidermal Disease Research
700294DQ™	*Streptococcus pyogenes*	Infected wound	Epidermal Disease Research
VR-1932DQ™	Human adenovirus 8	Case of epidemic keratoconjunctivitis	Infectious Disease Research
VR-168DQ™	Human Coxsackievirus A 10	Stool from a child in New York	Infectious Disease Research
VR-1887DQ™	Parechovirus A, Type 3	Young child	Infectious Disease Research
4356DQ™	*Lactobacillus acidophilus*		Microbiome Research
10240DQ™	*Micrococcus luteus*	Air	Microbiome Research
47011T1-DQ™	*Escherichia coli* with ATCC 16S Tag 1		Metagenomics Research
BAA-2975T3-DQ™	*Staphylococcus aureus* with ATCC 16S Tag 3		Metagenomics Research
3624T2-DQ™	*Clostridium perfringens* with ATCC 16S Tag 2		Metagenomics Research
204508DQ™	*Saccharomyces cerevisiae*	Wild type strain	Molecular Research
MYA-4941DQ™	*Saccharomyces cerevisiae*	Parent strain used Saccharoymes *cerevisiae* BJ5465	Molecular Research
VR-1660DQ™	Human echovirus 30	Fecal sample of boy with headache, stiff neck, and fever	Neural Research
VR-1583DQ™	JC polyomavirus	Brain tumor of owl monkey	Neural Research
MYA-646DQ™	*Candida dubliniensis*	Oral cavity of HIV-infected patient, Dublin, Ireland	Oral Health Research
43037DQ™	*Eubacterium nodatum*	Subgingival region of mouth	Oral Health Research
25586DQ™	*Fusobacterium nucleatum* subsp. *nucleatum*	Cervico-facial lesion	Oral Health Research
13419DQ™	*Streptococcus salivarius* subsp. *salivarius*		Oral Health Research
43037DQ™	*Tannerella forsythia*	Human periodontal pocket, Massachusetts, US	Oral Health Research
35405DQ™	*Treponema denticola*	Human periodontal pocket, Montreal, Canada	Oral Health Research
17978DQ™	*Acinetobacter baumannii*	Fatal meningitis of a 4-month old infant	Opportunistic Pathogen Research
19606DQ™	*Acinetobacter baumannii*	Urine	Opportunistic Pathogen Research
9643DQ™	*Aspergillus flavus*	Shoe sole, New Guinea	Opportunistic Pathogen Research
VR-837DQ™	BK polyomavirus	Urine of a kidney transplant patient	Opportunistic Pathogen Research
19146DQ™	*Brevundimonas diminuta*	Contaminant in culture of *Bacillus cereus*	Opportunistic Pathogen Research
MYA-2876DQ™	*Candida albicans*	Human clinical specimen	Opportunistic Pathogen Research

Table 2: Quantitative Genomic Nucleic Acids

ATCC® No.	Organism	Source Information	Research Applications
32196DQ™	*Candida krusei*	Cabbage frass, Japan	Opportunistic Pathogen Research
34449DQ™	*Candida lusitaniae*	Pig, Portugal	Opportunistic Pathogen Research
13047DQ™	*Enterobacter cloacae* subsp. *cloacae*	Spinal fluid	Opportunistic Pathogen Research
2001DQ™	*Nakaseomyces glabratus*	Feces	Opportunistic Pathogen Research
29905DQ™	*Proteus vulgaris*		Opportunistic Pathogen Research
29914DQ™	*Providencia stuartii*		Opportunistic Pathogen Research
15442DQ™	*Pseudomonas aeruginosa*		Opportunistic Pathogen Research
27853DQ™	*Pseudomonas aeruginosa*	Blood culture	Opportunistic Pathogen Research
BAA-2793DQ™	*Pseudomonas aeruginosa*	Urine from a 26-year-old female, Chile, 2014	Opportunistic Pathogen Research
13880DQ™	*Serratia marcescens* subsp. *marcescens*	Pond water	Opportunistic Pathogen Research
VR-302DQ™	Cowpox virus	Lesions on hands of milker, England	Pox Disease Research
7830DQ™	*Lactobacillus delbrueckii* subsp. *lactis*		Probiotic Research
8014DQ™	*Lactiplantibacillus plantarum*		Probiotic Research
9372DQ™	*Bacillus atrophaeus*		Quality Control
6633DQ™	*Bacillus spizizenii*		Quality Control
11437DQ™	*Clostridium sporogenes*	Cotton plant	Quality Control
19404DQ™	*Clostridium sporogenes*	Human with an acute case of gas gangrene	Quality Control
10541DQ™	*Enterococcus hiraei*		Quality Control
1022DQ™	*Aspergillus fumigatus*	Lung of chicken, Connecticut	Respiratory Disease Research
20542DQ™	*Aspergillus terreus*		Respiratory Disease Research
VR-1558DQ™	Betacoronavirus 1	Man with cold-like illness	Respiratory Disease Research
4617DQ™	*Bordetella bronchiseptica*		Respiratory Disease Research
51541DQ™	*Bordetella holmesii*	Animal blood, Buffalo, New York, USA	Respiratory Disease Research
15311DQ™	*Bordetella parapertussis*	Whooping cough	Respiratory Disease Research
9797DQ™	*Bordetella pertussis*		Respiratory Disease Research
BAA-589DQ™	*Bordetella pertussis*	Human clinical specimen	Respiratory Disease Research
25416DQ™	*Burkholderia cepacia*	Plant-derived foodstuff - onion, *Allium cepa*	Respiratory Disease Research
53592DQ™	*Chlamydia pneumoniae*	Throat of student with acute pharyngitis, Seattle, WA, 1983	Respiratory Disease Research
VR-1360DQ™	*Chlamydia pneumoniae*	Sputum of pneumonia patient, Georgia	Respiratory Disease Research
VR-2282DQ™	*Chlamydia pneumoniae*	Conjunctiva of a child	Respiratory Disease Research
13812DQ™	*Corynebacterium diphtheriae*		Respiratory Disease Research
VR-1823DQ™	Enterovirus D68	Nasopharyngeal swab from patient with respiratory illness.	Respiratory Disease Research
VR-1826DQ™	Enterovirus D68	Nasal-pharyngeal swab of hospitalized 10-month-old female with pneumonia, California, 1962	Respiratory Disease Research
33391DQ™	*Haemophilus influenaze*		Respiratory Disease Research
51907DQ™	*Haemophilus influenaze*		Respiratory Disease Research
VR-1DQ™	Human adenovirus 1	Adenoid tissue from five-year-old child with hypertrophied tonsils and adenoids, Maryland, 1953	Respiratory Disease Research
VR-846DQ™	Human adenovirus 2	Spontaneously degenerating tissue culture of adenoid tissue from 7-year-old girl with hypertrophied tonsils and adenoids,	Respiratory Disease Research
VR-3DQ™	Human adenovirus 3	Nasal washings, adult with a common cold, 1953, Maryland	Respiratory Disease Research
VR-1572DQ™	Human adenovirus 4	Throat washings of patient, Fort Leonard Wood, Missouri, 1952-1953	Respiratory Disease Research
VR-5DQ™	Human adenovirus 5	Spontaneously degenerating tissue culture of adenoid tissue from a 4-year-old girl with chronically infected tonsils	Respiratory Disease Research
VR-6DQ™	Human adenovirus 6	Spontaneously degenerating tissue culture of tonsil tissue from a 7-year-old girl with chronically infected tonsils	Respiratory Disease Research
VR-7DQ™	Human adenovirus 7	Throat washing from military recruit with pharyngitis, California, 1954	Respiratory Disease Research
VR-863DQ™	Human adenovirus 12	Stool from case of suspected poliomyelitis Massachusetts	Respiratory Disease Research
VR-740DQ™	Human coronavirus 229E	Nasal and throat swabs from man with upper respiratory illness	Respiratory Disease Research

Table 2: Quantitative Genomic Nucleic Acids

ATCC® No.	Organism	Source Information	Research Applications
VR-94DQ™	Human parainfluenza virus 1	Throat swab of 3-year-old boy with acute laryngitis, 1957	Respiratory Disease Research
VR-92DQ™	Human parainfluenza virus 2	11-month-old female with acute laryngotracheobronchitis, Ohio, 1955	Respiratory Disease Research
VR-93DQ™	Human parainfluenza virus 3	One-year-old female with pneumonia, Washington, DC, 1957	Respiratory Disease Research
VR-3350DQ™	Human parainfluenza virus 4a	Throat swab of patient with mild respiratory tract illness	Respiratory Disease Research
VR-26DQ™	Human respiratory syncytial virus	17-month-old male with pneumonia, Maryland, 1956	Respiratory Disease Research
VR-955DQ™	Human respiratory syncytial virus	Throat swab from 23-month-old girl with diffuse interstitial pneumonia, Massachusetts, 1977	Respiratory Disease Research
VR-1400DQ™	Human respiratory syncytial virus	Secretion from endotracheal tube of human infant with pneumonia.	Respiratory Disease Research
VR-1540DQ™	Human respiratory syncytial virus	Lower respiratory tract of infant with bronchiolitis and bronchopneumonia, Melborne, Australia, 1961	Respiratory Disease Research
VR-1580DQ™	Human respiratory syncytial virus	Respiratory secretions from child with acute respiratory disease seen at Children's Hospital of the District of Columbia, Washington, DC, 1962.	Respiratory Disease Research
VR-1559DQ™	Human rhinovirus 1A	Naso-pharyngeal washings from patient with mild respiratory illness, Ohio.	Respiratory Disease Research
VR-1645DQ™	Human rhinovirus 1B	Presumed from human throat washings	Respiratory Disease Research
VR-482DQ™	Human rhinovirus 2	Nasal washing from patient with cold	Respiratory Disease Research
VR-284DQ™	Human rhinovirus 14	Throat swab from young adult with upper respiratory illness.	Respiratory Disease Research
VR-283DQ™	Human rhinovirus 16	Throat swab from healthy 2-year-old female, Washington, DC, 1960	Respiratory Disease Research
VR-1663DQ™	Human rhinovirus 17	Presumed from throat swab from adult with upper respiratory illness, North Carolina, 1959	Respiratory Disease Research
VR-1187DQ™	Human rhinovirus 77		Respiratory Disease Research
VR-95DQ™	Influenza A virus (H1N1)	Patient in Puerto Rico, 1934	Respiratory Disease Research
VR-1469DQ™	Influenza A virus (H1N1)	Patient in Puerto Rico, 1934	Respiratory Disease Research
VR-1736DQ™	Influenza A virus (H1N1)	Nasopharyngeal specimen, patient positive for Flu A, Virginia, 2009	Respiratory Disease Research
VR-1884DQ™	Influenza A virus (H1N1)	Classical reassortant virus derived from A/California/07/2009 (H1N1)pdm09 and A/Puerto Rico/8/1934 (H1N1)	Respiratory Disease Research
VR-1893DQ™	Influenza A virus (H1N1)	Human in Florida, USA on October 31, 2006	Respiratory Disease Research
VR-1894DQ™	Influenza A virus (H1N1)	Human in California, USA on April 9, 2009	Respiratory Disease Research
VR-1679DQ™	Influenza A virus (H3N2)	Isolated from a human in Hong Kong, 1968	Respiratory Disease Research
VR-1881DQ™	Influenza A virus (H3N2)	Isolated from a human in August 31, 2005	Respiratory Disease Research
VR-1882DQ™	Influenza A virus (H3N2)	Human in Wisconsin, USA, on June 7, 2009	Respiratory Disease Research
VR-101DQ™	Influenza B virus	Patient in New York, 1940	Respiratory Disease Research
VR-823DQ™	Influenza B virus	Not known	Respiratory Disease Research
VR-1804DQ™	Influenza B virus	Human, Florida, 2006	Respiratory Disease Research
VR-1813DQ™	Influenza B virus	Human in Massachusetts, USA, 2012	Respiratory Disease Research
VR-1883DQ™	Influenza B virus	Human in Wisconsin, USA on February 20, 2010.	Respiratory Disease Research
VR-1885DQ™	Influenza B virus	Classical reassortant virus derived from B/Wisconsin/1/2010 (Yamagata Lineage) and B/Lee/1940	Respiratory Disease Research
VR-1931DQ™	Influenza B virus	Isolated from a human in Florida on November 09, 2015	Respiratory Disease Research
13048DQ™	*Klebsiella aerogenes*	Sputum	Respiratory Disease Research
BAA-1705DQ™	*Klebsiella pneumoniae*	Urine from a 42-year-old human male; 2007 CAP Survey	Respiratory Disease Research
BAA-2782DQ™	*Klebsiella pneumoniae*	Peritoneal fluid	Respiratory Disease Research
13883DQ™	*Klebsiella pneumoniae* subsp. *pneumoniae*		Respiratory Disease Research
700721DQ™	*Klebsiella pneumoniae* subsp. *pneumoniae*	Sputum from a 66 year-old man, 1994	Respiratory Disease Research
700603DQ™	*Klebsiella quasipneumoniae*	Urine from a hospitalized patient, Virginia	Respiratory Disease Research
33462DQ™	*Legionella longbeachae*	Human lung	Respiratory Disease Research
33152DQ™	*Legionella pneumophila* subsp. *pneumophila*	Human lung	Respiratory Disease Research

Table 2: Quantitative Genomic Nucleic Acids

ATCC® No.	Organism	Source Information	Research Applications
VR-24DQ™	Measles virus	Blood from patient in acute phase of typical measles	Respiratory Disease Research
25238DQ™	*Moraxella catarrhalis*		Respiratory Disease Research
VR-106DQ™	Mumps virus	Pooled saliva from patients, Massachusetts	Respiratory Disease Research
25420DQ™	*Mycobacterium africanum*	Expectorate; senegalese with pulmonary TB	Respiratory Disease Research
35734D™	*Mycobacterium bovis*	Bovine milk	Respiratory Disease Research
BAA-1052DQ™	*Mycobacterium talmoniae*	Clinical human specimen, July 31, 2000	Respiratory Disease Research
19422DQ™	*Mycobacterium microti*		Respiratory Disease Research
BAA-688DQ™	*Mycobacterium pinnipedii*	Clinical animal specimen, Australia, 1986	Respiratory Disease Research
25177DQ™	*Mycobacterium tuberculosis*		Respiratory Disease Research
25618DQ™	*Mycobacterium tuberculosis*	Derived from existing strain; New York, 1934	Respiratory Disease Research
29342DQ™	*Mycoplasmoides pneumoniae*	Patient with pneumonia	Respiratory Disease Research
VR-907DQ™	Sendai virus	Early history of this Helsinki laboratory strain is not clear	Respiratory Disease Research
49619DQ™	*Streptococcus pneumoniae*	Sputum, Phoenix, Arizona	Respiratory Disease Research
700669DQ™	*Streptococcus pneumoniae*	Hospital, Barcelona, Spain, 1984	Respiratory Disease Research
BAA-55DQ™	*Fannyhessea vaginae*	Vaginal flora from a healthy woman, Sweden, 1998	Reproductive Health Research
VR-879DQ™	*Chlamydia trachomatis*	Human cervix, cervicitis	Reproductive Health Research
VR-880DQ™	*Chlamydia trachomatis* Serovar I	Male urethra with non-gonococcal urethritis	Reproductive Health Research
VR-885DQ™	*Chlamydia trachomatis* Serovar D	Human cervix, asymptomatic	Reproductive Health Research
VR-901BD™	*Chlamydia trachomatis* LGV I	Lymph node from human with LGV	Reproductive Health Research
VR-903D™	*Chlamydia trachomatis* LGV III	Lymph node from human with LGV	Reproductive Health Research
VR-902BD™	*Chlamydia trachomatis* LGV II	Bubo from human with LGV	Reproductive Health Research
14019DQ™	*Gardnerella vaginalis*	Vaginal secretions	Reproductive Health Research
49145DQ™	*Gardnerella vaginalis*	Clinical isolate	Reproductive Health Research
33940DQ™	*Haemophilus ducreyi*		Reproductive Health Research
VR-539DQ™	Human Herpesvirus 1	Brain, human, encephalitis	Reproductive Health Research
VR-1493DQ™	Human Herpesvirus 1	Lip lesion of human with cold sore	Reproductive Health Research
VR-540DQ™	Human Herpesvirus 2	Brain of a 50 year old female with multiple sclerosis; Iceland	Reproductive Health Research
VR-734DQ™	Human Herpesvirus 2	Human genital infection	Reproductive Health Research
33820DQ™	*Lactobacillus crispatus*		Reproductive Health Research
33323DQ™	*Lactobacillus gasseri*		Reproductive Health Research
55195DQ™	*Lactobacillus iners*	Patient with bacterial vaginosis	Reproductive Health Research
25258DQ™	*Lactobacillus jensenii*	Human vaginal discharge	Reproductive Health Research
35241DQ™	*Mobiluncus curtisii*	Human vagina	Reproductive Health Research
5243DQ™	*Mobiluncus mulieris*	Human vagina	Reproductive Health Research
23114DQ™	*Mycoplasma hominis*	Rectal swab	Reproductive Health Research
33530DQ™	*Mycoplasmoides genitalium*	Urethra of male with non-gonococcal urethritis	Reproductive Health Research
19424DQ™	*Neisseria gonorrhoeae*		Reproductive Health Research
49226DQ™	*Neisseria gonorrhoeae*		Reproductive Health Research
700825DQ™	*Neisseria gonorrhoeae*	Male patient with disseminated gonococcal infection; 1983	Reproductive Health Research
27337DQ™	*Peptostreptococcus anaerobius*		Reproductive Health Research
29303DQ™	*Prevotella bivia*	Endometrium	Reproductive Health Research
15305DQ™	*Staphylococcus saprophyticus* subsp. *saprophyticus*	Urine	Reproductive Health Research
13813DQ™	*Streptococcus agalactiae*		Reproductive Health Research
30001DQ™	*Trichomonas vaginalis*	Vaginal exudate from human with acute vaginitis, 1956	Reproductive Health Research
50143DQ™	*Trichomonas vaginalis*	Human, Columbus, Ohio, 1980	Reproductive Health Research
PRA-302DQ™	*Babesia duncani*	Human blood, Washington state, 1991	Vector-borne Disease Research
PRA-398DQ™	*Babesia microti*	Blood, human babesiosis, Nantucket, MA, 1983	Vector-borne Disease Research
35210DQ™	*Borrelia burgdorferi*	Tick, Ixodes dammini; New York	Vector-borne Disease Research
30012DQ™	*Leishmania major*	Human, Teheran, Iran, 1949	Vector-borne Disease Research
PRA-405DQ™	*Plasmodium falciparum*		Vector-borne Disease Research
30266DQ™	*Trypanosoma cruzi*	Triatoma *infestans*, Chile, 1945	Vector-borne Disease Research

Table 2: Quantitative Genomic Nucleic Acids

ATCC® No.	Organism	Source Information	Research Applications
VR-1838DQ™	Zika virus	Blood of a rhesus monkey that became infected while stationed as a sentinel in forest near Entebbe, Uganda, 1947	Vector-borne Disease Research
VR-1843DQ™	Zika virus	Human serum specimen, Puerto Rico, December 2015	Vector-borne Disease Research
15597-B1DQ™	*Escherichia coli* phage MS2		Water Contamination
30174D™	*Naegleria fowleri*	Human spinal fluid; Orlando, FL, 1968	Water Contamination

CERTIFIED REFERENCE MATERIALS

ATCC Certified Reference Materials (CRMs) are quantified and produced under an ISO 17034 accredited process to confirm identity, well-defined characteristics, and an established chain of custody. These tools are ideal for:

- Establishing assay specificity and sensitivity
- Validating or comparing test methods
- Testing and calibration in ISO/IEC 17025 accredited labs

CRMs offer the highest level of quality assurance, accuracy, and traceability, providing you with complete confidence that your results are reliable and reproducible.

ATCC® No.	Organism	Source Information
qCRM-15531D™	*Mycoplasmoides pneumoniae*	Isolated by Hayflick from monkey kidney tissue-culture fluids of the FH strain (Eaton Agent Virus) supplied by C. Liu, who recovered this strain in embryonated eggs from a student with atypical pneumonia
qCRM-17981D™	*Mycoplasma hyorhinis*	Nasal cavity of pig
qCRM-19610D™	*Mycoplasma gallisepticum*	Suspension of tracheal and airsac tissues of chickens with chronic respiratory disease
qCRM-19989D™	*Mycoplasma fermentans*	Ulcerative balanitis
qCRM-23064D™	*Mycoplasma salivarium*	Saliva
qCRM-23206D™	*Acholeplasma laidlawii*	Sewage
qCRM-23714D™	*Mycoplasma orale*	Oropharynx of child, Washington, DC
qCRM-23838D™	*Mycoplasma arginine*	Mouse brain experimentally infected with scrapies
qCRM-25204D™	*Mycoplasma synoviae*	Hock joint of chicken
qCRM-27545D™	*Mycoplasma hominis*	Human blood culture

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