THE ESSENTIALS OF
LIFE SCIENCE RESEARCH
GLOBALLY DELIVERED™







확실하게 정량된 ATCC® 사의 Synthetic Nucleic Acids 제품을 소개 합니다. SYNTHETIC NUCLEIC ACIDS

In Vitro 에서 자라지 않는 미생물 연구는 어떻게 해야 할까요?

Synthetic nucleic acids 제품을 만나보세요! ATCC has identified the need for nucleic acids that represent clinically relevant organisms that cannot be reliably cultured *in vitro*, such as:

- Hepatitis C
- Mycoplasma genitalium
- Treponema pallidum
- Norovirus

당신의 Nucleic acids의 효율을 확신 하세요?

Synthetic nucleic acids 제품을 만나보세요! Choose from a growing list of ready-to-use, Biosafety Level 1 nucleic acids that serve as molecular models for organisms, such as:

- Eastern equine encephalitis virus (EEEV)
- St. Louis encephalitis virus (SLEV)
- Dengue virus
- Sapovirus

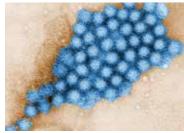


Image courtesy of Charles D. Humphrey, PhD, CDC

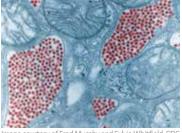


Image courtesy of Fred Murphy and Sylvia Whitfield, CD0

사용하고 있는 Synthetic Nucleic acids 의 정확성을 확인 하세요!

ATCC 에서 만드는 **Synthetic Nucleic acids** 는 다릅니다. ATCC synthetic nucleic acids are quantified by genome copy number using Droplet Digital™ PCR, and produced under ISO 9001:2008 certified as well as ISO/IEC 17025:2005 and ISO 13485:2003 accredited processes, so you can trust the accuracy of your results. What's more, each DNA or RNA preparation is stabilized using a DNA- or RNA-based BioMātrica® stabilization matrix (DNAstable®, RNAstable®) to ensure consistent results run after run.

ATCC의 제품 생성 과정을 소개 합니다

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-based assays. Multiple sequence alignment allows for the development of a consensus sequence that is used to synthetically build the finished product. Each synthetic preparation is then extensively tested to ensure:

- Identity
- Stability
- Functionality
- Quantification

To learn more about our synthetic molecular standards, visit us online at www.atcc.org/GenuineNucleics.

Multiple sequence alignment

Artificial RNA synthesis

Stabilization (RNAstable®)

Sequence Verification (Next generation sequencing)

Absolute Quantification (Droplet Digital™ PCR)

SEXUALLY TRANSMITTED INFECTION (STI) & BLOOD-BORNE PATHOGENS

Because STIs continue to have a profound impact on both human health and the global economy, the combination of early and rapid diagnosis, novel therapeutics and vaccines, and repeat testing during treatment are vital elements necessary for improving patient outcomes. ATCC has released synthetically derived nucleic acids to aid in the development of molecular-based assays for the detection of hepatitis, mycoplasma, and syphilis. Learn more at www.atcc.org/STI.

ATCC® No.	Synthetic Genome	Genetic Target
VR-3232SD	Hepatitis B virus	Fragments from the highly conserved precore, core, P, S and X regions
VR-3233SD	Hepatitis C virus	Fragments from 5'UTR and X-tail region (3'UTR)
BAA-2641SD	Mycoplasma genitalium	Fragments from the 16S gene, mgpA, and gap
BAA-2642SD	Treponema pallidum	Fragments from the <i>polA</i> , <i>tpr</i> , 23S gene, <i>arp</i> , 16S gene, <i>flaA</i> , 47kDa protein gene, and <i>bmp</i>
VR-3240SD	Human papillomavirus 16	Full length genome of HPV 16 derived from a plasmid clone
VR-3241SD	Human papillomavirus 18	Full length genome of HPV 18 derived from a plasmid clone

VECTOR-BORNE DISEASE

Due to the complexity of vector-borne pathogen transmission, and the unpredictable nature of insect vectors, vector-borne illnesses are among the most difficult infectious diseases to predict, prevent, and control. ATCC offers synthetically derived RNA to support the development of molecular-based assays for pathogen detection or quantification. Find these products online at www.atcc.org/VectorBorne.

ATCC® No.	Synthetic Genome	Genetic Target
VR-3228SD	Dengue virus type 1	Fragments from the capsid, membrane, and envelope regions
VR-3229SD	Dengue virus type 2	Fragments from the capsid, membrane, and envelope regions
VR-3230SD	Dengue virus type 3	Fragments from the capsid, membrane, and envelope regions
VR-3231SD	Dengue virus type 4	Fragments from the capsid, membrane, and envelope regions
VR-3239SD	Eastern equine encephalitis virus	Fragments from the capsid, NSP1, NSP3, 3' UTR, E1 envelope glycoprotein, and the E2 envelope glycoprotein regions
VR-3236SD	St. Louis encephalitis virus	Fragments from the NS1 gene, pre-membrane, envelope, NS5 gene, and 3' UTR regions
VR-3198SD	West Nile virus	Fragments from the 5' UTR, capsid protein C, membrane glycoprotein precursor prM, envelope protein E, nonstructural proteins NS1, NS2A, NS3, and NS5, and the 3' UTR regions

ENTERIC DISEASE

In the United States, foodborne illnesses are estimated to annually affect tens of millions of people, resulting in thousands of deaths and a multi-billion dollar economic burden associated with healthcare expense, productivity losses, product recalls, disease surveillance, and outbreak response. Protect the safety and quality of consumable commodities with synthetically derived nucleic acids representing major enteric pathogens. Learn more about ATCC food testing reference standards at www.atcc.org/food.

ATCC [®] No.	Synthetic Genome	Genetic Target
VR-3238SD	Astrovirus	Fragments from ORF1a, ORF1b, ORF2, and 3' UTR regions
VR-3234SD	Norovirus GI	Fragments from the RNA-dependent RNA polymerase and VP1 regions
VR-3235SD	Norovirus GII	Fragments from the RNA-dependent RNA polymerase, VP1, and VP2 regions
VR-3237SD	Sapovirus	Fragments from the RNA-dependent RNA polymerase, VP1, and polyprotein regions

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