

Acu-PCR BioAssay Protocol

For Research Use Only

Product Description: The Acu-PCR BioAssay is an in-vitro real-time polymerase chain reaction (qPCR) assay for the sequence-specific identification of bacterial or viral targets on a qPCR instrument. . The Acu-PCR BioAssay is intended for use as an aid in decision support for the management of contaminated environmental, food and/or water samples. The Acu-PCR BioAssay is intended for research use only and is not to be used as a diagnostic test to confirm the presence of infection.

Acu-PCR qPCR Positive Control Assay should be used concurrently with any Acu-PCR BioAssay testing to provide reliable interpretation of results. A current listing of Acumen Detection’s Acu-PCR BioAssays is provided in the table on page 2.

Acu-PCR BioAssays contain ready-to-use reagents that do not require freezing. All non-reconstituted kit components should be stored at 2-8°C. **Reconstituted reagents should be used immediately.**

Recommended qPCR Instrument Protocols:

Set the qPCR cycling profile to the specifications provided in the table. The qPCR instrument should be set to collect green fluorescence data (FAM: excitation max: 494nm, emission max: 518nm) in real-time for the annealing step of each cycle during amplification. Consult the instrument manufacturer’s instruction manual for programming and data acquisition instructions.

Step	Temperature (°C)	Total Duration
1	94	4 minutes
2	94	15 seconds
3	55	30 seconds
4	Repeat steps 2 & 3, 54 times	

Acu-PCR BioAssay Protocol:

1. Remove Acu-PCR BioAssay vials from the sealed pouch.
2. Remove screw cap from the Acu-PCR BioAssay vial.
3. Add 100 µL of sample to the appropriate Acu-PCR BioAssay vial, depending on research needs. One vial will have enough for one 100 µL reaction.
4. Mix thoroughly by pipetting up and down (the lyophilized cake should be completely dissolved).
5. Transfer 100 µL* into a qPCR reaction tube or well (plate), depending on qPCR instrument.
6. Repeat steps 1-5 until the appropriate number of samples have been prepared for analysis.
7. Immediately transfer the qPCR reaction tubes or sealed plate into the instrument and start the run.
8. Analyze the results.

***IMPORTANT NOTE:** If a different reaction volume is desired then the volumes can be adjusted accordingly (e.g., transfer 50 µL of the Acu-PCR BioAssay into each of two PCR reaction tubes).

Currently Available Acu-PCR BioAssays:

Product Number	Assay Product Name	Description	Volume/Vial (μL)
ACU-A-001010	Acu-PCR™ qPCR Negative Control	QPCR Negative Control	100
ACU-A-001020	Acu-PCR™ qPCR Negative Control	QPCR Negative Control	200
ACU-A-001110	Acu-PCR™ qPCR Positive Control	QPCR Positive Control	100
ACU-A-001120	Acu-PCR™ qPCR Positive Control	QPCR Positive Control	200
ACU-A-001210	Acu-PCR™ BA Chromo Assay	<i>Bacillus anthracis</i> (chromosomal gene)	100
ACU-A-001220	Acu-PCR™ BA Chromo Assay	<i>Bacillus anthracis</i> (chromosomal gene)	200
ACU-A-001310	Acu-PCR™ BA pXO1 Assay	<i>Bacillus anthracis</i> (pXO1 gene)	100
ACU-A-001320	Acu-PCR™ BA pXO1 Assay	<i>Bacillus anthracis</i> (pXO1 gene)	200
ACU-A-001410	Acu-PCR™ FT Assay	<i>Francisella tularensis</i>	100
ACU-A-001420	Acu-PCR™ FT Assay	<i>Francisella tularensis</i>	200
ACU-A-001510	Acu-PCR™ YP Assay	<i>Yersinia pestis</i>	100
ACU-A-001520	Acu-PCR™ YP Assay	<i>Yersinia pestis</i>	200
ACU-A-001610	Acu-PCR™ BR Assay	<i>Brucella</i> spp.	100
ACU-A-001620	Acu-PCR™ BR Assay	<i>Brucella</i> spp.	200
ACU-A-001710	Acu-PCR™ Cox Assay	<i>Coxiella burnetti</i>	100
ACU-A-001720	Acu-PCR™ Cox Assay	<i>Coxiella burnetti</i>	200
ACU-A-001810	Acu-PCR™ Pox Assay	<i>Pan-orthopox</i>	100
ACU-A-001820	Acu-PCR™ Pox Assay	<i>Pan-orthopox</i>	200
ACU-A-001910	Acu-PCR™ BG Assay	<i>Bacillus atrophaeus</i> (<i>B. globigii</i> , <i>B. subtilis</i> var. <i>niger</i>)	100
ACU-A-001920	Acu-PCR™ BG Assay	<i>Bacillus atrophaeus</i> (<i>B. globigii</i> , <i>B. subtilis</i> var. <i>niger</i>)	200
ACU-A-002010	Acu-PCR™ BTK Assay	<i>Bacillus thurgiensis</i> var. <i>kurstaki</i>	100
ACU-A-002020	Acu-PCR™ BTK Assay	<i>Bacillus thurgiensis</i> var. <i>kurstaki</i>	200
ACU-A-002110	Acu-PCR™ LM Assay	<i>Listeria monocytogenes</i>	100
ACU-A-002120	Acu-PCR™ LM Assay	<i>Listeria monocytogenes</i>	200
ACU-A-002210	Acu-PCR™ SmE Assay	<i>Salmonella enterica</i>	100
ACU-A-002220	Acu-PCR™ SmE Assay	<i>Salmonella enterica</i>	200

These products are not intended for the prevention, diagnosis, or treatment of a disease.

Product specific Safety Data Sheets and Certificate of Conformance documents (by Lot number) can be found at:

www.acumendetection.com

Please contact us at info@acumendetection.com for more information on the different Assay Kits provided.