



The Virology Resource Center™

**Research Products
and Services for
Over Two Decades**



Catalogue

Advanced Biotechnologies Incorporated

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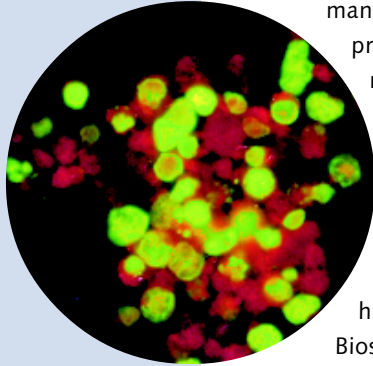
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Advanced Biotechnologies Incorporated

Who We Are

Founded in 1982, Advanced Biotechnologies Inc (ABI), *The Virology Resource Center™*, specializes in the development, manufacture, and supply of critical, value-added products and services for the research, diagnosis, monitoring, and treatment of infectious diseases.



ABI has state-of-the-art laboratories totaling 28,000 sq. ft., which were designed and built around ABI's concept of fully integrating the R&D, production, and purification of select human etiologic agents. This includes two Biosafety Level-3 laboratories for large-scale *in vitro* production of HIV and other critical viruses, supported internally by virology, protein purification, biochemistry, molecular genetics, and microbiological quality control and assurance.

Major Markets

ABI serves the life science research, biotechnology, diagnostics, and pharmaceutical industries in the US and international marketplace.

Products Offered

ABI provides a wide range of research reagents. The viral/bacterial pathogens covered are retroviruses, herpesviruses, Chlamydia, Neisseria, vaccinia, RSV, influenza, and others.

Services Offered

ABI also provides specialized services including:

- antiviral testing
- electron microscopy
- contract manufacturing
- viral clearance assays
- bioprocess validation

You can also find our complete list of products and services, ordering information, and distributor contacts on our Web site.

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Please note: All products with catalog numbers listed in **RED**, are biohazardous.

Section 1

DNA/RNA Controls

ABI's nucleic acids are purified from five different sources:

- **Sucrose Density Gradient Purified Virus** – direct pelleted virus that is sucrose banded for added purity
- **Infected Cells** – transduced or pathogen infected cell cultures
- **Cultured Bacteria** – pelleted bacteria from liquid, plate, or slant culture
- **Broth Cultures** – bacteria grown in liquid culture and collected by centrifugation
- **Infected Human Serum**- serum obtained from infected individuals
- **Cultured Cells** – cells used to propagate virus

ABI QUANTITATED NUCLEIC ACID CONTROL Information.

Each vial contains 250 µl total volume with 10⁴ DNA copies/µl*; copy number may vary depending on gene amplified. Quantification was done by either RT-PCR, PCR-ELISA using specific oligonucleotide primer pairs, or Southern blot analysis.

*Products with * have 10⁵ DNA copies/µl.

Catalog No.	Product	Unit Size
08-730-100	Adenovirus-2 infected cell DNA	100 µl
08-728-000	Adenovirus-5 infected cell DNA	100 µl
08-942-250*	BK virus quantitated DNA	250 µl
08-932-250	<i>Chlamydia pneumoniae</i> Quantitated Bacterial DNA gradient purified Elementary Bodies	250 µl
08-901-000	<i>Chlamydia trachomatis</i> _{LGV- II} strain 434 DNA gradient purified Elementary Bodies	100 µl
08-931-000	<i>Chlamydia trachomatis</i> _{LGV type II} strain 434 Quantitated Bacterial DNA	250 µl
08-701-000	CMV _{AD169} DNA sucrose density gradient purified virus	100 µl
08-925-000	CMV _{AD169} Quantitated DNA sucrose density gradient purified virus Quantitated for HCMV encoded UL123 gene	250 µl
08-939-250	EBV _{P3HR1} Type 2 (EBV-2) Quantitated Viral DNA sucrose density gradient purified virus	250 µl
08-702-000	EBV _{B95-8} DNA sucrose density gradient purified virus	100 µl
08-926-000	EBV _{B95-8} Quantitated Viral DNA sucrose density gradient purified virus	250 µl
08-941-250	<i>Helicobacter pylori</i> Quantitated Bacterial DNA	250 µl
08-814-000	Hepatitis C (Type 1A) Viral RNA infected human serum	50 µl

Catalog No.	Product	Unit Size
08-945-250	HHV-6A _{GS} Quantitated Viral DNA	250 μ l
08-703-000	HHV-6 B _{Z-29} DNA sucrose density gradient purified virus	100 μ l
08-923-000	HHV-6 B _{Z-29} Quantitated Viral DNA sucrose density gradient purified virus. Quantitated for HHV-6 encoded 13R gene	250 μ l
08-765-000	HHV-7 _{H7-4} DNA infected cell culture	100 μ l
08-753-100	HHV-7 _{Jl} Infected Cell DNA infected cell culture	100 μ l
08-735-000	HHV-8 _{KS-1} Infected Cell DNA infected cell culture	100 μ l
08-938-250	HHV-8 _{KS-1} Quantitated Viral DNA direct pelleted virus. Quantitated for HHV-8 encoded GP 02 gene	250 μ l
08-707-000	HIV-1 _{IIIB} DNA infected cell culture	100 μ l
08-708-000	HIV-2 _{NIH-Z} DNA infected cell culture	100 μ l
08-754-100	HPV-16 Viral DNA transformed cells	100 μ l
08-755-100	HPV-18 Viral DNA transformed cells	100 μ l
08-921-000	HSV-1 MacIntyre Quantitated DNA sucrose density gradient purified virus. Quantitated for HSV-1 encoded DNA Polymerase gene	250 μ l
08-705-000	HSV-1 _{MacIntyre} DNA sucrose density gradient purified virus	100 μ l
08-706-000	HSV-2 _G DNA sucrose density gradient purified virus	100 μ l
08-922-000	HSV-2 _G Quantitated DNA sucrose density gradient purified virus Quantitated for HSV-2 encoded DNA Polymerase gene	250 μ l
08-711-000	HTLV-1 _{MT-2} DNA infected cell culture	100 μ l
08-818-000	HTLV-I _{MT-2} Viral RNA sucrose density gradient purified virus	50 μ l
08-710-000	HTLV-II _{C3-44 (Mo)} DNA infected cell culture	100 μ l
08-943-250*	JC Virus Quantitated DNA	250 μ l
08-908-100	<i>Mycoplasma pneumoniae</i> DNA	100 μ l
08-924-000	<i>Neisseria gonorrhoeae</i> Quantitated Bacterial DNA concentrated bacteria from cultures	250 μ l
08-944-250*	SV-40 Quantitated DNA	250 μ l
08-907-000	<i>Toxoplasma gondii</i> DNA purified Tachyzoites	100 μ l
08-940-250	Vaccinia Virus, Lister Strain, Quantitated Viral DNA sucrose density gradient purified virus	250 μ l
08-927-000	VZV _{Rod} Quantitated Viral DNA direct pelleted virus. Quantitated for VZV encoded glycoprotein E gene	250 μ l

Custom Nucleic Acid Preparations are also available.

Section 2

Purified Virus/Viral Lysates

ABI produces a wide variety of inventoried virus reagents to expedite and support research. Sucrose density gradient purified virus, viral lysate, or high-titered infectious virus (pelleted) preparations are available. This selection of virus reagents allows the researcher to determine the best preparation for study.

Custom Virus Production

Utilizing our integrated technologies, ABI offers start-to-finish virus propagation, purification, and characterization services. We have extensive expertise propagating viruses *in vitro* from numerous virus families. A full range of virus inactivation methods is also available. Please contact us regarding your particular needs.

Catalog No.	Product	Unit Size
10-198-000	Adenovirus-5 Cesium Density Gradient Purified Virus w/TCID ₅₀ Infectivity Titer (500x)	1 ml
10-103-000	CMV _{AD169} Sucrose density gradient purified virus	1 mg
10-143-000	CMV _{AD169} High Grade Purified Viral Lysate	1 mg
10-144-000	CMV _{AD169} Purified Viral Lysate	1 mg
10-183-000	CMV _{AD169} Direct Pelleted Virus w/TCID ₅₀ Infectivity Titer (1000x)	1 ml
10-115-000	EBV _{B95-8} Sucrose density gradient purified virus	1 mg
10-147-000	EBV _{B95-8} Transforming Whole Virus Purified Viral Lysate	1 mg
10-250-000	Feline Leukemia Virus, Thielen strain Sucrose density gradient purified virus	1 mg
10-171-000	HHV-6 B _{Z-29} Sucrose density gradient purified virus5 mg
10-172-000	HHV-6 B _{Z-29} Purified Viral Lysate5 mg
10-241-500	HHV-6A _{GS} Purified Viral Lysate5 mg
10-240-500	HHV-6A _{GS} Sucrose density gradient purified virus5 mg
10-214-000	HHV-8 _{KS-1} Purified Viral Lysate	1 mg
10-219-000	HIV-1 _{89.6} Concentrated Virus w/TCID ₅₀ Infectivity Titer (H9 cells)	1 ml
10-177-000	HIV-1 _{Ba-L} Direct Pelleted Virus w/TCID ₅₀ Infectivity Titer (500x)	1 ml
10-226-000	HIV-1 _{HXB2D} Concentrated Virus w/TCID ₅₀ Infectivity Titer	1 ml
10-124-000	HIV-1 _{IIIB} Direct-Pelleted Virus w/TCID ₅₀ (1000x)	1 ml
10-118-000	HIV-1 _{IIIB} Sucrose density gradient purified virus	1 mg
10-119-000	HIV-1 _{IIIB} Purified Viral Lysate	1 mg
10-188-000	HIV-1 _{MN} Sucrose density gradient purified virus	1 mg

Catalog No.	Product	Unit Size
10-189-000	HIV-1 _{MN} Purified Viral Lysate	1 mg
10-191-000	HIV-1 _{MN} Direct-Pelleted Virus w/TCID ₅₀ Infectivity Titer (1000x).....	1 ml
10-227-000	HIV-1 _{NL4-3} Concentrated Virus w/TCID ₅₀ Infectivity Titer	1 ml
10-127-000	HIV-2 _{NIH-Z} Sucrose density gradient purified virus	1 mg
10-128-000	HIV-2 _{NIH-Z} Purified Viral Lysate	1 mg
10-145-000	HSV-1 _{MacIntyre} Purified Viral Lysate	1 mg
10-110-000	HSV-1 _{MacIntyre} Sucrose density gradient purified virus	1 mg
10-146-000	HSV-2 _G Purified Viral Lysate	1 mg
10-111-000	HSV-2 _G strain Sucrose density gradient purified virus	1 mg
10-112-000	HTLV-I Purified Virus	1 mg
10-113-000	HTLV-I Purified Viral Lysate	1 mg
10-210-000	Human Influenza A _{PR8} Sucrose density gradient purified virus	1 mg
10-000-000-1	Human Influenza/B/Lee/40 Sucrose density gradient purified virus	1 mg
10-248-000	Respiratory Syncytial Virus _{A-2} Purified Viral Lysate	1 mg
10-249-000	Respiratory Syncytial Virus _{A-2} Direct-Pelleted Virus w/TCID ₅₀	1 mg
10-247-000	Respiratory Syncytial Virus _{A-2} Sucrose density gradient purified virus	1 mg
10-149-000	SIV _{mac} 251 (Macaque) Sucrose density gradient purified virus	1 mg
10-150-000	SIV _{mac} 251 Purified Viral Lysate	1 mg
10-152-000	SRV-1 Sucrose density gradient purified virus	1 mg
10-153-000	SRV-1 Purified Viral Lysate	1 mg
10-218-000	SRV-2/SupT-1 Sucrose density gradient purified virus	1 mg
10-223-000	SRV-5/SupT-1 Sucrose density gradient purified virus	1 mg
10-252-000	Vaccinia Lister Strain Purified Sucrose density gradient purified virus	1 mg
10-253-000	Vaccinia Lister Strain Purified Sucrose density gradient purified virus; UV Psoralen Inactivated	1 mg
10-254-000	Vaccinia WR Strain Purified Sucrose density gradient purified virus	1 mg
10-255-000	Vaccinia WR Strain Purified Sucrose density gradient purified virus; UV Psoralen Inactivated	1 mg

Custom Virus Production is also available

Section 3

Infectious Disease Antigens

All ABI infectious disease antigens are prepared with the needs of the diagnostic manufacturing community in mind. Every product has been carefully optimized and characterized for maximum assurance of high sensitivity and specificity in a variety of antibody detection assay formats. Where possible, antigen preparations have been developed using the performance of existing 510(k) approved diagnostic assays or kits as a reference point.

Purification strategies vary according to the product and the intended use and include immunoaffinity purification of individual relevant proteins, conventional chromatographic separations, ultracentrifugation, and proprietary extraction methodologies. In all cases, antigen function, stability, and reproducibility are given the critical attention necessary to ensure that our antigens are of the highest quality available.

Each batch of antigen, after extraction, purification, and titer adjustment, is aliquoted to two-vial sizes (1.0 and 25 milliliters) before freezing and final quality control testing. In this way, a one-milliliter sample of a particular lot truly represents the larger size aliquot.

Catalog No.	Product	Unit Size
10-501-001	EBV _{P3HR1} Clarified Infected Cell Extract	1 ml
10-501-025	EBV _{P3HR1} Clarified Infected Cell Extract	25 ml
10-523-001	EBV Nuclear Antigen-1 (EBNA-1) Recombinant Antigen	1 ml
10-523-025	EBV Nuclear Antigen-1 (EBNA-1) Recombinant Antigen	25 ml
10-502-001	EBV _{P3HR1} Immunoaffinity Purified Viral Capsid Antigen	1 ml
10-502-025	EBV _{P3HR1} Immunoaffinity Purified Viral Capsid Antigen	25 ml
10-505-001	HFS Uninfected Cell Extract	1 ml
10-515-001	HSV-1 _{MacIntyre} Clarified Infected Cell Vero Extract	1 ml
10-515-025	HSV-1 _{MacIntyre} Clarified Infected Cell Vero Extract	25 ml
10-516-001	HSV-2 _G Clarified Infected Cell Extract	1 ml
10-516-025	HSV-2 _G Clarified Infected Cell Extract	25 ml
10-518-001	Rubeola _{Edmonston} (Measles) Clarified Infected Cell Extract (1x)	1 ml
10-518-025	Rubeola _{Edmonston} (Measles) Clarified Infected Cell Extract (1x)	25 ml
10-508-001	Vero (African green monkey kidney cells) Clarified Uninfected Cell Extract	1 ml
10-508-025	Vero (African green monkey kidney cells) Clarified Uninfected Cell Extract ..	25 ml
10-514-001	VZV _{ROD} Clarified Infected Cell Vero Extract	1 ml
10-514-025	VZV _{ROD} Clarified Infected Cell Vero Extract	25 ml

Infectious Disease Antibodies

Section 4

ABI hybridomas are produced by standard fusion and selection methodologies to yield the highest quality monoclonal antibody possible for a specific application. Production of the monoclonal antibody is accomplished by cell culture or ascites methods, depending on the production characteristics of the individual antibody secreting hybridoma clone. **All MABs listed are produced by ascites unless otherwise noted.**

Polyclonal antibodies are produced using highly purified antigens to immunize rabbits, chickens, sheep, or goats to generate high-titer antisera.

Catalog No.	Product	Type	Unit Size
13-150-100	EBV anti-(EA-R) protein p17	IgG _{2a}	100 µg
13-156-100	EBV Nuclear Antigen EBNA-1 p72/87	IgG ₁	100 µg
13-216-100	HHV-6 A/B anti-p41	IgG _{2a}	100 µg
13-217-001	HHV-6A gp82/105 (cell culture supernatant)	IgG _{2b}	1 ml
13-218-100	HHV-6 A/B anti-gp54/64/116	IgG _{2b}	100 µg
13-219-001	HHV-6 A/B MAb gp116/64/54 (cell culture supernatant)	IgG _{2b}	1 ml
13-138-100	HHV-6A Early Protein, p41/38	IgG ₁	100 µg
13-139-001	HHV-6A Early Protein, p41/38 (cell culture supernatant)	IgG ₁	1 ml
13-223-100	HHV-7 KR 4 (Ultrafiltered Cell Cultured Supernatant)	IgG ₁	1 ml
13-212-100	HHV-8 MAb to ORF K8.1 A/B	IgG ₁	100 µg
13-213-100	HHV-8 MAb to ORF K8.1A	IgG _{2a}	100 µg
13-211-100	HHV-8 MAb to ORF 59	IgG _{2b}	100 µg
13-210-100	HHV-8 MAb to ORF 73 (anti-LNA-1) Rat MAb ..	IgG _{2c}	100 µg
13-214-050	HHV-8 Rabbit antibody vIL-6 Polyclonal		50 µg
13-157-100	HIV-1 anti-nef (aa 168–174)	IgG ₁	100 µg
13-155-100	HIV-1 anti-nef (aa 153–158)	IgG ₁	100 µg
13-160-100	HIV-1 anti-nef (aa 170–181)	IgG ₁	100 µg
13-152-100	HIV-1 anti-nef (aa 31–50)	IgG ₁	100 µg
13-167-100	HIV-1 anti-rev (aa 33–48)	IgG ₁	100 µg
13-162-100	HIV-1 anti-tat (aa 1–16)	IgG ₁	100 µg
13-161-100	HIV-1 anti-tat (aa 1–9)	IgG _{2b}	100 µg
13-103-100	HIV-1 _{III B} anti-p17 gag	IgG ₁	100 µg
13-137-100	HIV-1 _{III B} anti-p51/66 pol	IgG ₁	100 µg
13-108-100	HIV-1 _{III B} anti-gp120 env	IgG ₁	100 µg
13-105-100	HIV-1 _{III B} anti-gp120 env (aa 307-320)	IgG ₁	100 µg

Catalog No.	Product	Type	Unit Size
13-104-100	HIV-1 _{III B} anti-gp41 env	IgG ₁	100 μg
13-102-100	HIV-1 _{III B} anti-p24 gag	IgG ₁	100 μg
13-204-000	HIV-1 _{III B} rabbit anti- gp120 Polyclonal50 ml
13-203-000	HIV-1 _{III B} rabbit anti- p24 Polyclonal50 ml
13-222-100	Rabbit anti-Vaccinia Polyclonal		100 μg
13-112-100	SIV _{mac} 251 anti-p27 gag	IgG ₁	100 μg
13-113-100	SIV _{mac} 251 anti-p27 gag	IgG ₁	100 μg

Native & Recombinant Viral Proteins

Section 5

ABI's Purified Native Proteins are viral antigens, immunoaffinity purified from clarified infected cell extracts.

Our Recombinant Proteins are viral antigens cloned and produced in protein expression systems.

Catalog No.	Product	Type	Unit Size
14-109-050	HIV-1 _{HXB2} gp41 (expressed in yeast) <i>Amino acids 546 to 682, glycosylated ectodomain</i>	Recombinant Protein	50 µg
14-128-050	HIV-1 _{IIIB RT} p66 <i>Amino acids 3 to 190</i>	Recombinant Protein	50 µg
14-129-050	HIV-1 _{MN} gp120	Recombinant Protein	50 µg
14-108-050	HIV-1 nef (expressed in <i>E.coli</i>)	Recombinant Protein	50 µg
14-102-050	HIV-1 _{IIIB} gp120 env	Purified Native Protein	50 µg
14-103-050	HIV-1 _{IIIB} gp160 env	Purified Native Protein	50 µg
14-127-050	HIV-1 _{IIIB} gp160	Recombinant Protein	50 µg
14-101-050	HIV-1 _{IIIB} p24 gag	Purified Native Protein	50 µg
14-126-050	HIV-1 _{IIIB} p24	Recombinant Protein	50 µg
14-110-050	HIV-2 _{ST} gp36 <i>Amino acids 534 to 654, glycosylated ectodomain</i>	Recombinant Protein	50 µg

HHV-6,-7,-8 Research Kits & Supplies

ABI has developed kits in the following formats:

Enzyme Linked Immunosorbent Assay (ELISA)

Immunofluorescence Assay (IFA)

These kits are for research use only and are not intended for clinical use.

Enzyme Linked Immunosorbent Assay (ELISA) Antibody Detection

Each kit performs 96 tests. Kits contain one 96-well plate assembled in kit form with positive and negative control, and all necessary reagents to perform the assay. The plate is stabilized with ABI Immunoassay Stabilizer and packaged individually in a vapor barrier pouch with desiccant.

Catalog No.	Product	Unit Size
15-401-000	HHV-6B ₂₋₂₉ —IgG whole virus lysate	96-well plate
15-501-000	HHV-8—IgG whole virus lysate	96-well plate

Immunofluorescence Assay (IFA) Antibody Detection

Each kit contains ten 10-well slides and performs 100 tests. IFA slides are packaged individually with desiccant. Kits contain both positive and negative controls, and all necessary reagents to perform the assay.

15-301-000	HHV-6— IgG antibody	10 x 10-well slides
15-321-000	HHV-7— IgG antibody	10 x 10-well slides
15-330-000	HHV-8— IgG antibody—lytic	10 x 10-well slides

Kit Supplies

10-601-001	Immunoassay Stabilizer	1 Liter
15-302-005	HHV-6 IFA Slides	5-pk
15-322-005	HHV-7 IFA Slides	5-pk
15-331-005	HHV-8 IFA Slides	5-pk

Human Monocytes

Advanced Biotechnologies Inc offers purified monocyte cell suspensions derived from human peripheral blood mononuclear cells. Given limited availability of whole human tissue for isolation of macrophages and the heterogeneity of these cells in different tissues, circulating human blood monocytes offer the best source material for establishing macrophage cultures. Using our integrated technologies of cell separation by centrifugal elutriation (counter-flow centrifugal separation of cells by size). Cryopreserved ampules of purified monocytes are also available as a flexible, proven alternative to fresh cultures. Large lots from individual donors are available on a reserve basis.

Catalog No.	Product	Unit Size
07-210-000	Elutriated Adult Monocytes- Fresh - for US sale only	each
07-210-001	Elutriated Human Adult Monocytes, frozen (2 x 10 ⁷ cells)	1 ml

Monocyte Product Disclaimer

Product variances may result from donor characteristics including: overall donor health, blood draw timing, and other conditions. Variances may include cell counts and cell viability and are NOT the responsibility of ABI. Variation in laboratory technique, methods, equipment, and testing materials (i.e., Human AB sera, cytokines, etc.), may create unexpected differences in individual cell performance.

Human Interleukin-2

ABI has been a long-standing industry supplier of purified, natural human interleukin-2. Our IL-2 is produced from human mixed-lymphocyte cultures and purified by a series of column chromatography steps. IL-2 is assayed for biological activity by MTS bioassay (cell proliferation) and by long-term T-cell growth assay using human peripheral blood mononuclear cells.

03-020-050	Delectinized Interleukin-2	50 ml
03-001-050	Purified Interleukin-2	50 ml

Antiviral Drug Testing Services

Advanced Biotechnologies Inc (ABI) offers *in vitro* testing of drugs (chemicals, experimental agents) for antiviral activity against human immunodeficiency virus (HIV-1, HIV-2) and human herpesviruses (HSV-1, HSV-2, VZV, CMV, and HHV-6). Other human viruses such as dengue, parainfluenza, influenza, rhinovirus, vaccinia, and respiratory syncytial virus are also available for testing. Bovine Viral Diarrhea Virus (BVDV) can be used as a model for Hepatitis C Virus. Please inquire for other viruses of interest.

All testing is customized to meet the specific testing needs of our clients. Protocols for each specific assay are developed in consultation with the client and are subject to the client's approval. A wide variety of antiviral assays have been conducted for pharmaceutical and biotechnology companies.

Testing is done as a service. All experimental reagents remain under the proprietary control of the client. Confidentiality agreements can be arranged.

Seven Protocol formats:

- Cytotoxicity assay
- One virus MOI x several drug concentrations
- Several virus MOI x several drug concentrations
- Combinations of two drugs for synergism, antagonism studies
- High throughput
- 24-, 48-, or 96-well plates
- Specialized formats developed in consultation with client.

Available HIV-1 testing assays:

- Rapid screen with indicator cell line by cytopathological effect (CPE)
- Plaque assay using transformed cells with CD₄ receptor
- Monitoring with HIV-1 p24 antigen capture assay with cell line (H9 or other), human peripheral, mononuclear, cells, or human macrophages
- Laboratory strains, wild-type isolates, drug resistant strains, and reference virus strains are available for drug studies. Laboratory strains are in our inventory, others can be grown up for a specific study.

Available assays for herpes and other viruses:

- Plaque assay
- Cytopathological effect
- Cytoproliferation assay

Drug presentation choices

- Pretreatment of virus (Neutralization assay)
- Pretreatment of cells
- Drug present during viral absorption
- Drug in culture medium
- Combination

Controls run with each assay:

- Negative control – no virus and no compound
- Positive control – virus, but no compound
- Cytotoxicity – compound, but no virus. A cell proliferation assay can be run to quantify the amount of cytotoxicity.

Custom Testing

Virucidal Disinfectant Testing Services

ABI will test compounds for their virucidal and disinfectant properties using

EPA approved AOAC methods: Virucides DIS/TSS-7, 1981.

Retroviruses (HIV-1, HIV-2)

Human Herpesviruses (HSV-1, HSV-2, CMV, VZV, HHV-6, HHV-8)

Influenza A and B

Coxsackievirus

Human Rotavirus

Poliovirus

Respiratory Syncytial Virus (RSV)

Rhinovirus

Adenovirus

Echovirus

Dengue

Bioprocess Validation

Characterization of materials and processes used in the development and manufacture of biopharmaceuticals and in the evaluation of the safety of products are critical considerations to the biotechnology and pharmaceutical industries. Following FDA's "Points-To-Consider" guidelines, biologics manufacturers can implement testing programs for production and purification of biological products.

Advanced Biotechnologies Inc has expertise in four niche areas of virology that are critical to Bioprocess Validation: large-scale eukaryotic cell culture, virus production and purification, and electron microscopy services. These integrated technical capabilities provide a valuable resource to assist manufacturers with the following concerns of large-scale bioproduct manufacturing:

- High-titered virus preparations in sufficient volumes for spiking studies.
- Virus detection and quantitation by centrifugation.
- Virus detection and quantitation by electron microscopy.

ABI enjoys close-working relationships with the leading full-service bioprocess validation companies and can assist you with your specific needs. Please call us to discuss your requirements.

Bioprocess Validation Services:

- Clarified Harvest Fluids from Virus-Infected Cultures
- Direct Virus Pelleting, Small-Volume Test Articles
- Direct Virus Pelleting, Large-Volume Test Article
- Sucrose Density Gradient Purification, Small-Volume Test Article
- Sucrose Gradient Purification, Large-Volume Test Article, 10-Liter minimum
- Custom Virus Quantitation Study

Electron Microscopy

Section 10

Electron microscopy is the only method which permits the observation and analysis of viruses and other biological specimens at an ultrastructural level with high resolution. Electron microscopy is valuable in visualizing normal and abnormal cell anatomy, observing the effects of experimental manipulations on cells and tissues, and examining the fine structure of macromolecules for the presence, absence, and quantitation of known microbial or adventitious agents in specimens.

Electron Microscopy services can accompany auxiliary methodologies performed at ABI. These methods include tissue culture, cell transfections, virus infection fractionation and purification, immunofluorescence straining, PCR, and *in situ* hybridization. EM may be done in support of process development, or for research projects such as antiviral studies or bioreactor failure investigation. Specialized services and custom projects are done on a contract basis.

ABI's areas of expertise in the field of biological electron microscopy include:

- Ultra-Thin Section Electron Microscopy.
- Immuno-Electron Microscopy.
- Qualitative and Quantitative Negative Stain.
- Virus Quantitation and Characterization.
- Virus Particle Counts.
- Bioprocess Monitoring and Validation.

Custom R&D Project

ABI has extensive expertise, technology, and resource networks in the fields of human virology and cell biology. We have integrated these resources and capabilities and made them available in the form of value-added products and services to expedite research and development programs in the biopharmaceutical and biomedical research industries.

Whether the project involves pre-clinical process development and validation of a biological product, characterization of a newly isolated virus, production and purification of biomolecules, or start-to-finish development of a specific recombinant protein, ABI can provide project management and execution using our integrated technologies and resources:

Cell Biology

- Preclinical process development.
- Validation of a biological product.
- Mass cell culture and elutriation of cells from peripheral blood.
- Bioprocess validation and bioassay services.
- Downstream processing technologies, including continuous-flow centrifugation, column chromatography, ultrafiltration, and other process methods.

Molecular Biology

- Molecular genetic services including, nucleic acid purification, analysis, and PCR testing.
- Plasmid construction for gene expression studies; specialization in retroviral vector construction.

Immunology

- Production and purification of biomolecules for antibody formation.
- Development of specific recombinant proteins.
- Antibody assays, specializing in herpesviruses and retroviruses.

Virology

- Characterization of newly isolated viruses.
- Large-scale virus production and purification, specializing in retroviruses, herpesviruses, and influenza.
- Virus inactivation and validation studies.
- Electron microscopy services.

Bacteriology

- Large-scale production of pathogen-infected cells, specializing in Chlamydiae.
- Mycoplasma detection and clearing.

General Ordering Information

(all forms can be found our Web site www.abionline.com)

Establish an Account

To establish credit, you may print the credit application form from our Web site and fax it to ABI. The first order will still need to be prepaid by check, VISA, or MasterCard while we check your credit references.

Ordering

NIH users please note: You can also order through the NIH Intramall—<http://intramall.nih.gov>. For all others: Purchase orders must be mailed or faxed, but you may wish to call ahead for pricing and availability. You may also place an order by phone using VISA or MasterCard.

Baltimore Metro Area: 410-792-9779
Washington, DC Metro Area: 301-470-3220
Toll Free (USA, Canada): 800-426-0764
FAX: 301-497-9773

Purchase orders must include: **Purchase order number, product description, catalog number, quantity, price , shipping address with telephone number, billing address.**

Shipments

Shipments are made F.O.B. Columbia, Maryland, using best routing determined by ABI. Perishable items are shipped overnight, Monday through Wednesday. Prior to shipment of biohazardous materials, an Acceptance of Responsibility form must be signed and returned.

Adjustments

Notify our Customer Service Department for written authorization prior to returning products. Products may not be returned without our written permission. When requesting return authorization, please include your purchase order number, our invoice number, product description, catalog number, and lot number.

Conditions of Sale

Sales are made without seller's warranty, either expressed or implied, and claims are limited to replacement of unacceptable product or refund of price. The safe and reasonable handling of products is the responsibility of the customer. ABI accepts no liability for injury resulting from their use. All products are sold FOR RESEARCH PURPOSES ONLY, NOT FOR USE IN DIAGNOSTIC PROCEDURES.

Confidentiality

Proprietary arrangements with our customers are entirely confidential.

ABI's Virology Products are Available Through our International Distributors

Sellex, Inc.

BRAZIL

E-mail: saopaulo@sellex.com

Web Site: www.sellex.com

Dakewe Biotech Co. Ltd.

CHINA – HONG KONG

E-mail: info@dakewe.com

Web Site: www.dakewe.com

Autogen Bioclear UK Ltd.

ENGLAND

E-mail: info@autogenbioclear.com

Web Site: www.autogen-

bioclear.co.uk

QuadraTech.

ENGLAND

E-mail: quadratech@btinternet.com

Web Site: www.quadratech.co.uk

BioAnalytica S.A.

GREECE

E-mail: bioanalyt@hol.gr

Advanced Tech. & Ind. Co., Ltd.

HONG KONG –

E-mail: sales@advtechind.com

CHINA - CONTACT

E-mail: sales@finechemical.cn

Web site: www.advtechind.com

Dexmor Limited

ISRAEL

E-mail: dexmor@bezeqint.net

Bouty S.p.A. Italiana Laboratori

ITALY

E-mail: comuzio@bouty.it

Web Site: www.bouty.it

EXPERTEAM SAS

ITALY

E-mail: expertm@vegapark.ve.it

Shigematsu & Company Ltd

JAPAN

E-mail: ken@shigematsu.co.jp

Web Site: www.shigematsu-bio.com

SIPACO Diagnostics

PORTUGAL

E-mail: sipaco.cordeiro@sipaco.com

Web Site: www.sipaco.com

BST Scientific Ptd Lte SINGAPORE

(Malaysia, Indonesia, Brunei,
The Philippines, and Thailand)

E-mail: ellen@bst-asia.com or

bsts@bst-asia.com

Web Site: www.bst-asia.com

Rochelle Chemicals

SOUTH AFRICA

E-mail: rochellechem@icon.co.za

Web site: www.rochelle.co.za

Deltaclon, S.L.

SPAIN

E-mail: info@deltacolon.com

Web Site: www.deltacolon.com

Morwell Diagnostics GmbH

SWITZERLAND

Email: info@morwelldiagnostics.com

Hong Jing Company

TAIWAN

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E-mail: netherlands@tebu-bio.com

For all other countries, please
contact ABI at

info@abionline.com.