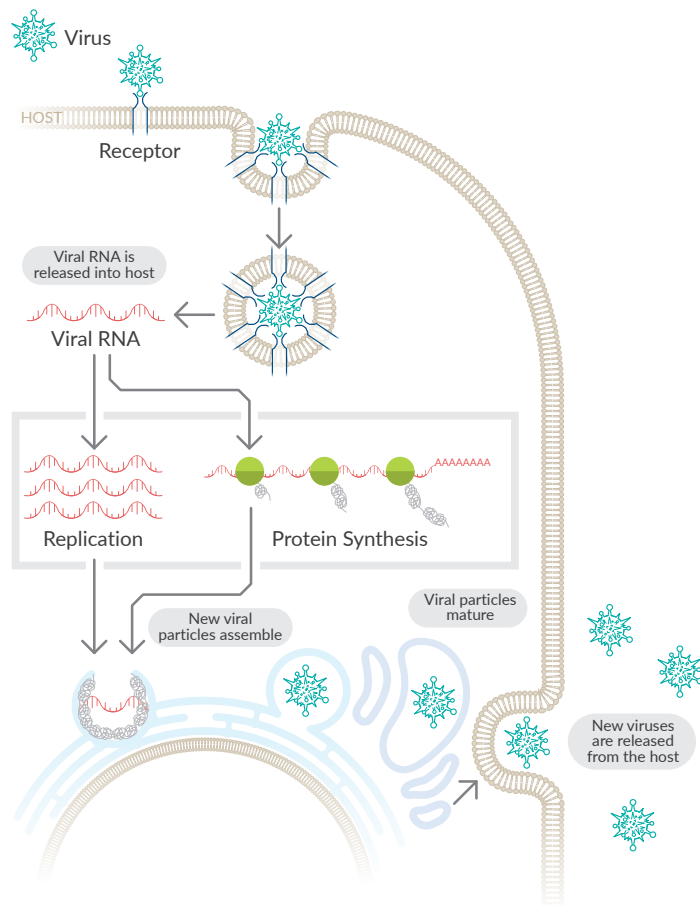


# Antiviral Research Tools

Cayman provides a diverse set of antiviral agents that can be used to study the treatment and prevention of infectious diseases and other health challenges. This important set of tools can be used to further understand the growth cycle of harmful viruses and key signaling pathways, including how the body's immune system responds to eliminate infections.



Distributed by



Host infection and viral replication.

## CONTINUE INSIDE THIS BROCHURE TO EXPLORE:

- Virus-Host Fusion Disruptors
- Endosomal pH Regulators
- Protease Inhibitors
- Viral Polymerase Blockers
- Oxysterol-Binding Protein Inhibitors
- Reverse Transcriptase Inhibitors
- Integrase Bond Disruptors

## Simplify Screening and Hit-Seeking

### Antiviral Screening Library

Item No. 30390

A library of more than 410 antiviral-associated compounds including those with antiviral activity against HIV, hepatitis B virus, coronaviruses, and more.

### SARS-CoV-2 Screening Library

Item No. 9003509

A made-to-order compound library curated through *in silico* modelling using Maestro (Schrödinger Suite) software by screening over 70,000 compounds targeting SARS-CoV-2 proteins.



# Antiviral Compounds

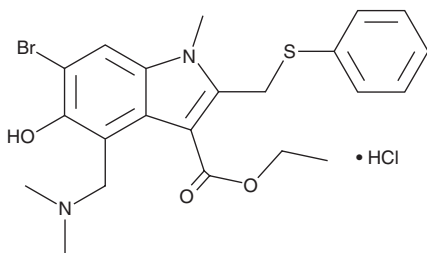
## Virus-Host Fusion Disruptors

### FEATURED PRODUCT

#### Arbidol (hydrochloride)

Item No. 16933

A broad-spectrum antiviral that blocks viral fusion with target membranes, prohibiting viral entry into cells. It is effective against numerous viruses, including influenza A, B, C, as well as hepatitis B and C.



### Abl Kinase Inhibitors

Abl kinases are composed of distinct domains that enable them to act as scaffolds for signaling complexes and to regulate protein function through phosphorylation of downstream targets. Blocking virus-host fusion with Abl kinase inhibitors is one antiviral strategy, since this kinase activity is required for viral entry.

Item No.	Product Name
16253	GNF-2
16254	GNF-5
13139	Imatinib (mesylate)
11497	Saracatinib

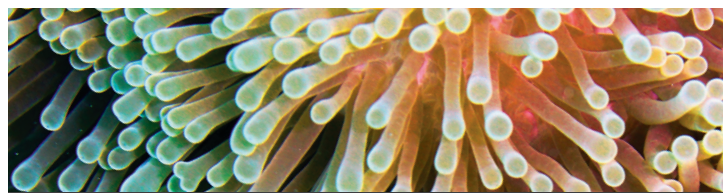
See all Abl family & Bcr-Abl inhibitors at [www.caymanchem.com](http://www.caymanchem.com)

## Endosomal pH Regulators

Viruses entering host cells by endocytosis require an acidic pH in endosomal vesicles for virus-host fusion and to carry out the replication process. Agents that interfere with endosome-mediated viral entry can impair virus replication.

### Endosomal Acidification Inhibitors

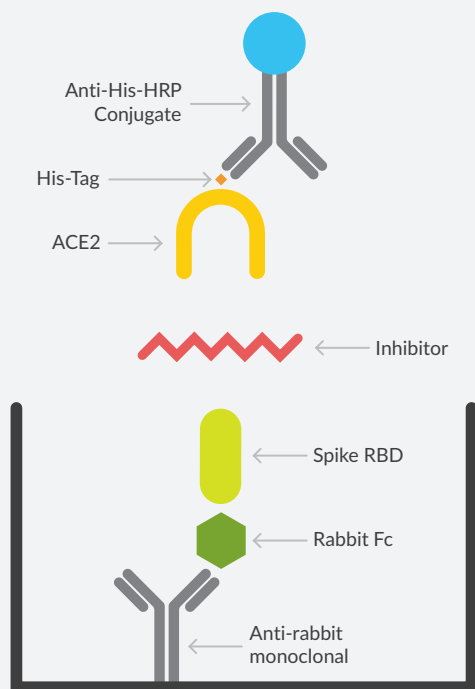
Item No.	Product Name
14194	Chloroquine (phosphate)
17911	Hydroxychloroquine (sulfate)



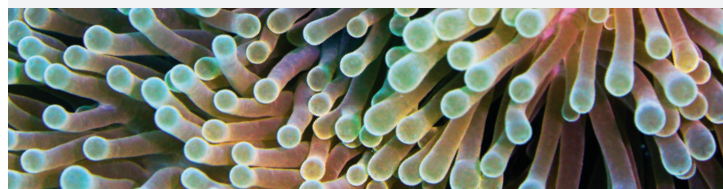
## SCREEN FOR INHIBITORS OF SPIKE-ACE2 BINDING

### SARS-CoV-2 Spike-ACE2 Interaction Inhibitor Screening Assay Kit - Item No. 502050

A robust and easy-to-use platform for identifying novel inhibitors of SARS-CoV-2 spike and ACE2 interactions. This assay uses a rabbit Fc-tagged SARS-CoV-2 spike S1 receptor binding domain (RBD) that binds to a mouse anti-rabbit antibody-coated plate. When His-tagged ACE2 binds the spike RBD, the complex is detected with an HRP-conjugated anti-His antibody. A positive control is included for competition of the SARS-CoV-2 spike RBD-ACE2 interaction.



Learn more at [www.caymanchem.com/SARS-CoV-2Tools](http://www.caymanchem.com/SARS-CoV-2Tools)



Download Cayman Currents Issue 33: Antiviral Strategies for Emerging Infectious Diseases at [www.caymanchem.com/antiviralcurrent](http://www.caymanchem.com/antiviralcurrent)

## Protease Inhibitors

The main protease (M<sup>pro</sup> or 3C-like protease) and the papain-like protease (PL<sup>pro</sup>) process the genomic RNA released in the cytoplasm of the host cell after infection. Protease inhibitors block the viral life cycle by selectively preventing proteolytic cleavage that is essential to forming the replicase complex for viral replication.

### HCV Protease Inhibitors

Item No.	Product Name
20835	Asunaprevir
18379	Boceprevir
22144	Simeprevir (sodium salt)
20054	Telaprevir

### HIV Protease Inhibitors

Item No.	Product Name
15866	Darunavir
13854	Lopinavir
15144	Nelfinavir (mesylate)
13872	Ritonavir

### Influenza Neuraminidase Inhibitors

Item No.	Product Name
15779	Oseltamivir Acid
23765	Peramivir

See all protease inhibitors at [www.caymanchem.com](http://www.caymanchem.com)

## Viral Polymerase Blockers

Viruses encode their own polymerases for transcription and replication. A class of nucleotide analogs has been developed as antivirals to confuse polymerase activity, thus counteracting viral replication.

### RdRp Inhibitors

Item No.	Product Name
16085	BCX4430 (Galidesivir)
30469	GS-441524
30354	Remdesivir
16757	Ribavirin
23384	T-705 (Favipiravir)

See all RdRp inhibitors at [www.caymanchem.com](http://www.caymanchem.com)

## Oxysterol-Binding Protein Inhibitors

Oxysterol-binding protein (OSBP) plays a vital role in producing the membrane-bound viral replication organelles that form at the membrane contact sites between the ER and Golgi. OSBP-targeted compounds interfere with virus replication.

### Oxysterol-Binding Protein Inhibitors

Item No.	Product Name
13288	Itraconazole
30310	OSW-1

## Reverse Transcriptase Inhibitors

Retroviruses reverse transcribe viral RNA into DNA for insertion into the host DNA. Nucleoside analogs as well as non-nucleoside compounds have been developed to prevent viral replication by inhibiting reverse transcriptase activity.

### Reverse Transcriptase Inhibitors

Item No.	Product Name
14412	Efavirenz
15117	Nevirapine
21559	Rilpivirine
13874	Tenofovir
15492	Zidovudine

## Integrase Bond Disruptors

Retroviral integrases integrate viral DNA into host cell DNA, forming a provirus that can be activated to produce viral proteins. Integrase inhibitors block incorporation of the virus into host DNA by preventing covalent bond formation with host DNA.

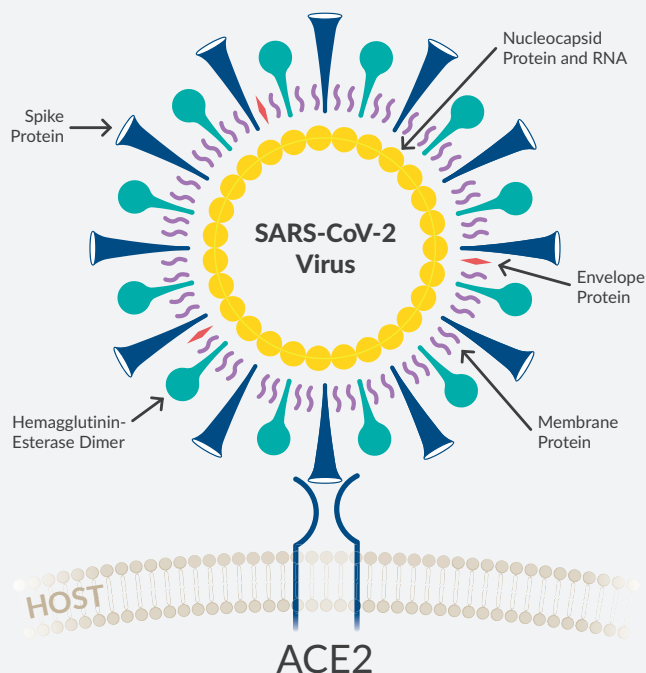
### Integrase Inhibitors

Item No.	Product Name
24964	3,5-Dicaffeoylquinic Acid
22191	Dolutegravir
14842	Mitoxantrone (hydrochloride)
16071	Raltegravir (potassium salt)
70740	U-73122

Read the Article: Using Existing Therapeutics  
Against SARS-CoV-2 at [www.caymanchem.com/news](http://www.caymanchem.com/news)

## Tools to Study SARS-CoV-2-Host Interactions

Cayman provides SARS-CoV-2 viral proteins, host cell receptor antibodies, and a screening assay that can help researchers identify agents that will minimize or block viral entry and replication. qRT-PCR kits are available to detect SARS-CoV-2 in a research setting as well as serological ELISAs to screen for antibodies against SARS-CoV-2.



Item No.	Product Name
30582	ACE2 (human) Monoclonal Antibody (Clone AC18F)
30583	ACE2 (human) Monoclonal Antibody - Biotinylated (Clone AC18F)
30584	ACE2 (human) Monoclonal Antibody (Clone AC384)
30427	SARS-CoV-2 Nucleocapsid Protein
30430	SARS-CoV-2 Surface Glycoprotein (433-506)
30429	SARS-CoV-2 Surface Glycoprotein Receptor Binding Domain
30428	SARS-CoV-2 Surface Glycoprotein Receptor Binding Motif
502050	SARS-CoV-2 Spike-ACE2 Interaction Inhibitor Screening Assay Kit
30660	SARS-CoV-2 qPCR detection 1-plex assay-ORF1ab
30661	SARS-CoV-2 qPCR detection 1-plex assay-N
30662	SARS-CoV-2 qPCR detection 1-plex assay-RdRP
30663	SARS-CoV-2 qPCR detection 1-plex assay-E
32097	SARS-CoV-2 NP & RBD Total Antibody ELISA Detection Kit
30665	SARS-CoV-2 Spike S1-RBD IgG & IgM ELISA Detection Kit
32096	SARS-CoV-2 Surrogate Virus Neutralization Test Kit
31063	Q-Plex™ SARS-CoV-2 Human IgG (4-Plex)

Learn more about the application of these tools at [www.caymanchem.com/SARS-CoV-2Tools](http://www.caymanchem.com/SARS-CoV-2Tools)

## Host Immune Response Research Tools

Once viral genetic material is detected, a cascade of signaling events is initiated to activate the type I interferon (IFN) pathway to eradicate the virus. Cayman has developed protein, antibody, and assay tools to study cytosolic RNA and DNA sensing that leads to activation of antiviral IFNs and pro-inflammatory cytokines.

### Cytosolic RNA Sensing Tools

Item No.	Product Name
26355	MAVS Monoclonal Antibody (Clone 7B9)
25620	RIG-I helicase domain (human, recombinant)
25300	RIG-I Monoclonal Antibody (Clone 1E3)
22441	KIN1400

### Single-Plex Cytokine Detection Assays

Item No.	Product Name
583301	Interleukin-1 $\alpha$ (human) ELISA Kit
583311	Interleukin-1 $\beta$ (human) ELISA Kit
501030	Interleukin-6 (human) ELISA Kit
583371	Interleukin-6 (mouse) ELISA Kit

### Interferon Activation Proteins & Antibody

Item No.	Product Name
22817	TBK1 (human, recombinant)
22811	IRF3 (human recombinant)
23590	IRF3 (S386A, S396A mutant; human recombinant)
24937	IRF3 Polyclonal Antibody

### Multi-Plex Cytokine Detection Assays

Item No.	Product Name
28325	Q-Plex™ Human Cytokine - Inflammation (9-plex)
28328	Q-Plex™ Human Cytokine - HS Screen (15-plex)
28327	Q-Plex™ Human Cytokine - Screen (16-plex)
28332	Q-Plex™ Mouse Cytokine - Inflammation (14-plex)
28329	Q-Plex™ Mouse Cytokine - Screen (16-plex)

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