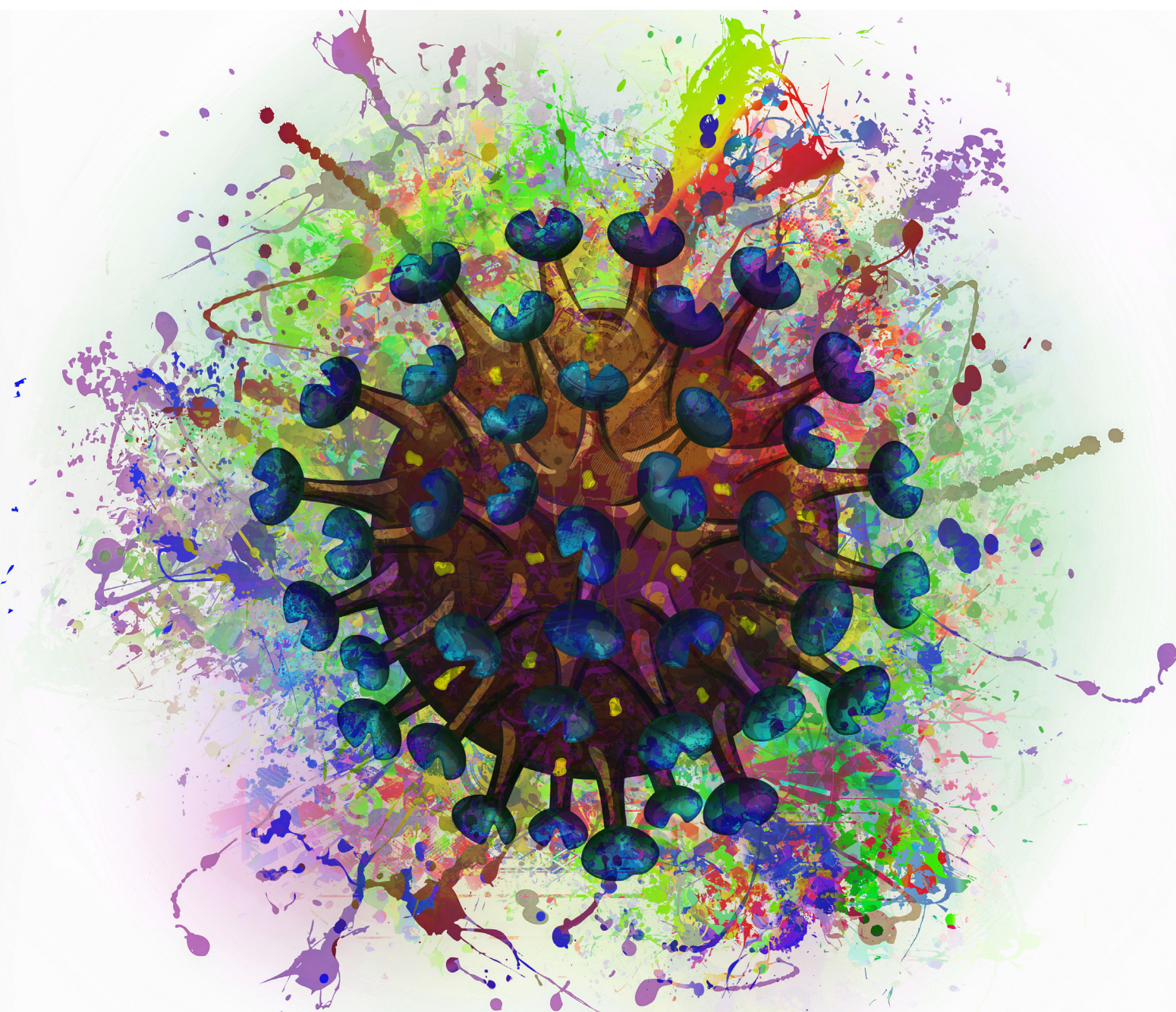




CORONAVIRUS

RESEARCH TOOLS FOR DRUG DISCOVERY,
DIAGNOSTICS & VACCINES

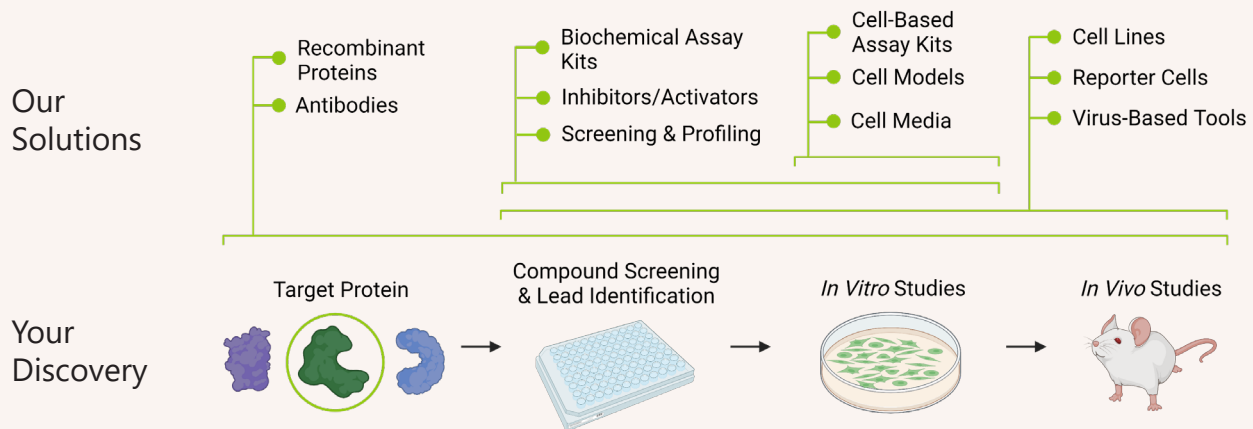
Proteins | Assay Kits | Virus-Based Tools | Antibodies | Custom Services



Start to Finish Solutions for Coronavirus

The COVID-19 pandemic, caused by the novel SARS-CoV-2 coronavirus, has ravaged the globe, infecting over 600 million people and causing over 6.5 million deaths as of Fall 2022. Ending the pandemic will require a combination of effective interventions, including therapeutics, diagnostics, and vaccines. While the latest vaccines have proven effective at reducing hospitalizations and deaths, new variants will likely continue to emerge and spread, requiring further research and advancements in prevention, diagnosis, and patient care. BPS Bioscience supports end-to-end research and development efforts from protein design to assay kit development and screening services. Our proven innovative solutions have already been utilized by pharma and vaccine developers worldwide.

How we drive drug discovery



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Our Advantages



Produced In-House

- Made in the USA at our San Diego, CA laboratory
- Get customized, personal support directly from the source



Committed to Excellence

- ISO 9001:2015-certified Quality Management System
- Lot-specific quality testing



Broad Portfolio

- Full range of solutions for drug discovery, diagnostics, and vaccine development
- Cell lines, lentiviruses, proteins, screening assay kits, & antibodies
- Tools for the latest emergent variants



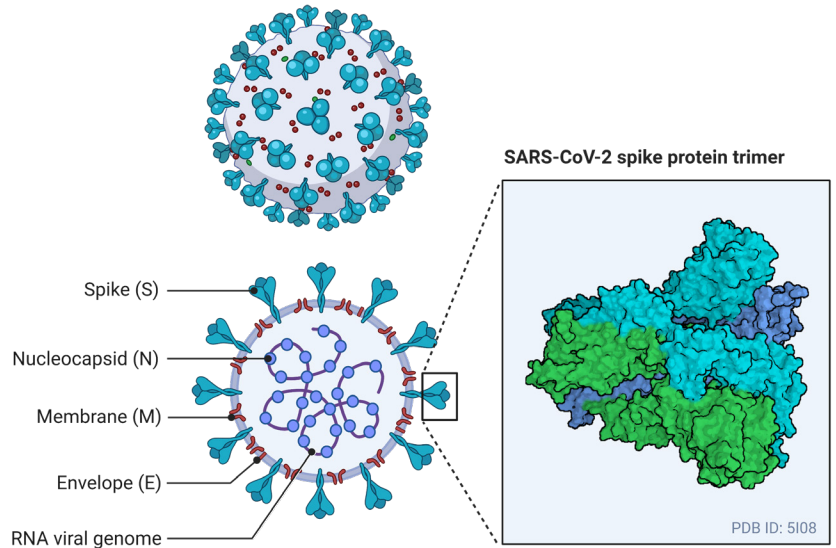
Customized Services

- CRISPR, screening & profiling, & custom development
- Custom cell line development services, custom knock-out and knock-in cell lines
- Unique panels of assays for evaluation of lead compounds



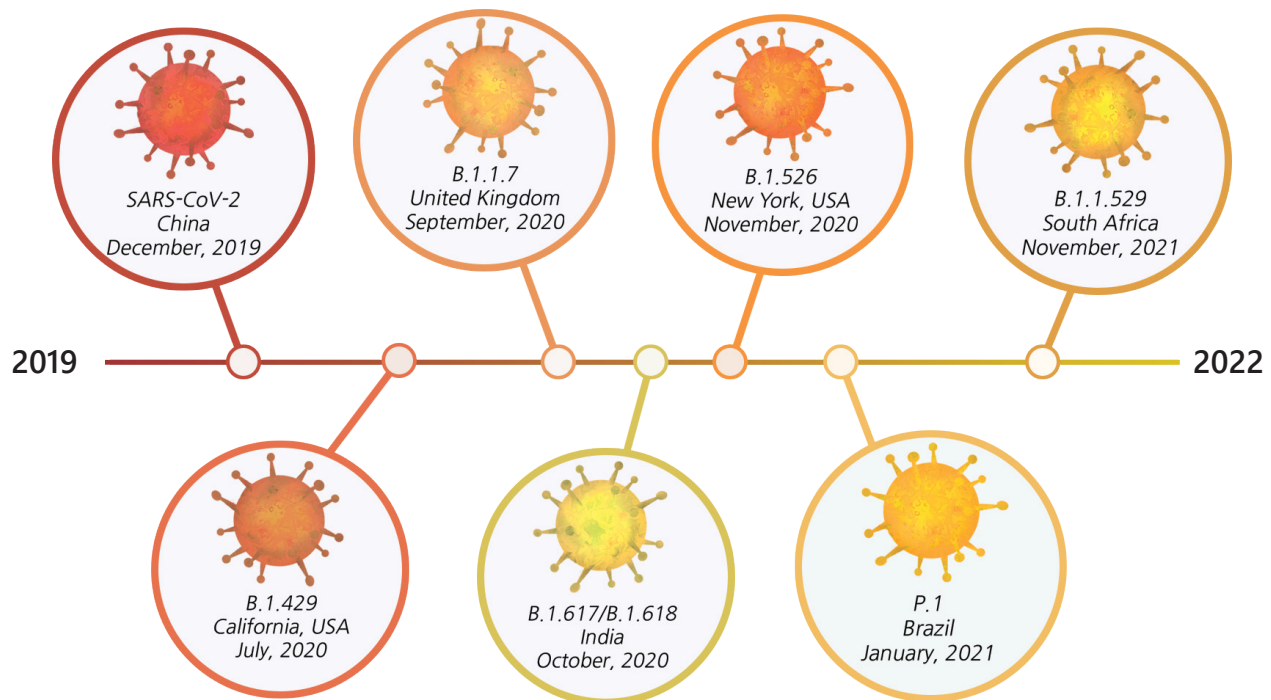
Coronavirus Structure and Mutant Variants

Coronaviruses, including SARS-CoV-2, are lipid membrane particles that have a distinct crown-like appearance, comprised of spike protein trimers. The spike protein is the primary protein responsible for receptor binding and fusion with the host cell membrane. Coronaviruses encode only a few structural proteins: spike, nucleocapsid, membrane, and envelope, while also encoding 16 nonstructural proteins and 9 accessory proteins involved in replication and virulence. Since spike is the major viral surface protein, mutations that arise in spike can lead to changes in virulence and infectivity, which has been closely monitored in emerging variants.



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Throughout the course of the COVID-19 pandemic, new variants have emerged to become the dominant strain. The process has cycled through multiple variants with the newer dominant strain more infectious than its predecessor. BPS Bioscience has remained on the cutting edge of variant research by providing the latest tools for each emerging variant, including spike proteins, assay kits, pseudoviruses (lentivirus and VSV), and neutralizing antibodies.



Compare variants and find tools on our Variants page: bpsbioscience.com/sars-cov-2-coronavirus-variants



Research Products

All our products are developed with strict specifications, validated to support the intended applications for each. Our ISO 9001:2015-certified quality management system ensures consistent manufacturing within an environment of continuous improvement. Learn how our products can advance your COVID-19 discoveries.

PROTEINS



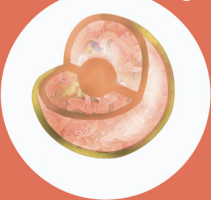
- High purity recombinant proteins, including: Spike (S1, RBD, Trimer), 3CL Protease, Papain-Like Protease (PLPro), RdRp, Nucleocapsid, ACE2, and more
- Worldwide Spike Variants, Spike Mutants
- Various tags including His and Fc
- Labeling includes Biotin or Eu
- Proteins for SARS-CoV-2, SARS-CoV-1, MERS-CoV, ACE2 Human and Monkey

ASSAY KITS



- Convenient activity assay kits for screening enzyme inhibitors and target molecules impacting SARS-CoV-2 pathological mechanisms
- Validation made simple with multiple kit formats
- Chemiluminescent, colorimetric, fluorogenic, and TR-FRET
- Homogenous, no-wash options available (fluorogenic and TR-FRET)

CELL LINES



- Convenient for binding assays, flow cytometry, and screening antibodies
- ACE2-expressing options available: HeLa, HEK293, CHO, and Vero E6 (TMPRSS2-expressing)
- Screen for antibodies against human ACE2, for competition binding studies with ACE2 soluble protein, and to determine blocking effects of Spike neutralizing antibodies

ANTIBODIES



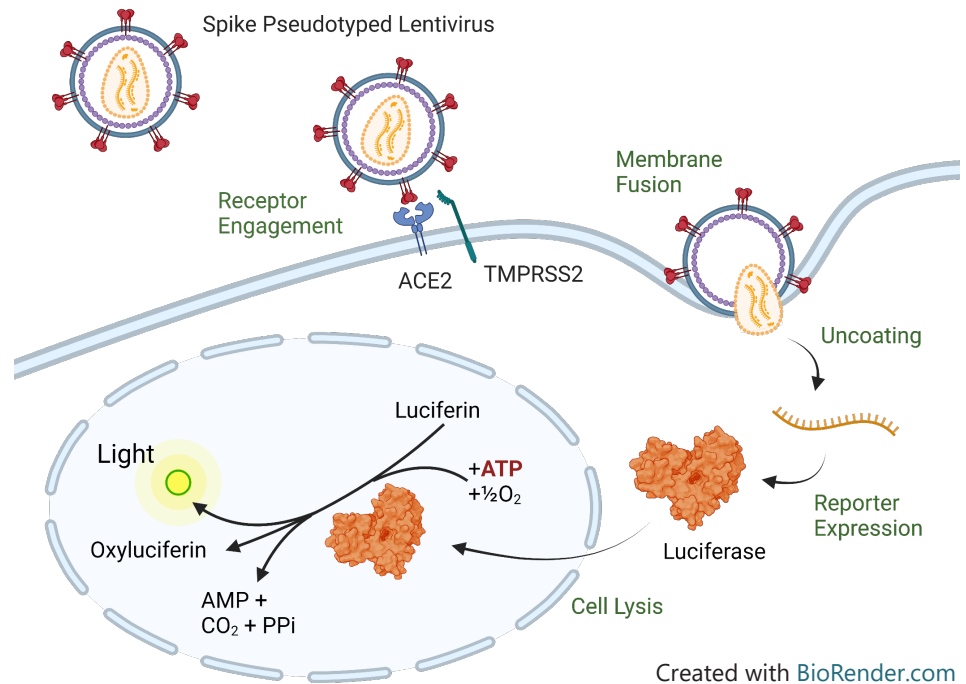
- Applications include neutralization, binding studies, flow cytometry, ELISA
- Anti-Spike, anti-Nucleocapsid antibodies
- Variant-recognizing clones
- Human IgG & IgM controls



Pseudoviruses for Modeling Infection

Principle of the Assay

Lentivirus and VSV vectors can be pseudotyped, which involves replacing the native envelope protein with another viral protein of interest. For example, variant-specific SARS-CoV-2 Spike protein can be expressed on lentivirus or VSV delta G particles for infection of ACE2-expressing cells. The delivered genomes are engineered to express reporter genes such as luciferase or eGFP, enabling sensitive, quantitative readouts of infection. These systems serve as excellent models to screen for blocking antibodies or small molecule inhibitors of infection.



Options for Optimal Experimentation

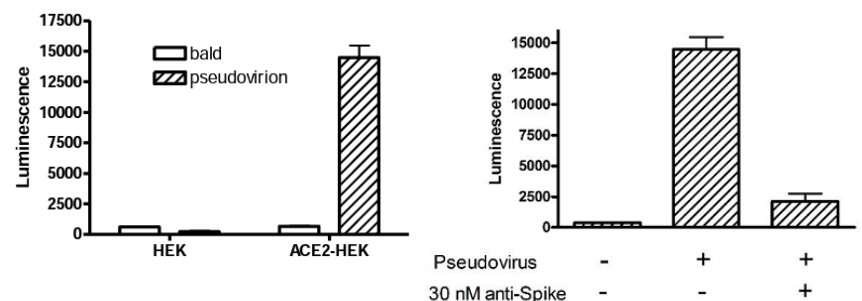
Virus Type	Reporters	Target Cell Types	Coronavirus Spike Variants
<ul style="list-style-type: none"> Lentivirus VSV delta G (preferred for Vero E6 infection) 	<ul style="list-style-type: none"> Luciferase eGFP Dual (Luc+eGFP) 	<ul style="list-style-type: none"> HeLa (ACE2) CHO (ACE2) HEK293 (ACE2) Vero E6 (TMPRSS2) 	<ul style="list-style-type: none"> SARS-CoV-2 emerging variants: BA.4/5, BA.2, BA.1 Previous variants of interest: B.1.621, B.1.617.2, B.1.617.1, and many more

Advantages

- High titer
- Simple protocols, suitable for high throughput assays
- Bald Lentivirus and VSV delta G controls
- Lentiviruses to express receptors: ACE2, TMPRSS2
- Quickly customizable to address emerging variant mutations or new viruses

Example Data

Spike (SARS-CoV-2) Pseudotyped Lentivirus (Luc-eGFP Dual Reporter) (#79982) transduction of ACE2-HEK293 cells monitored by luciferase activity



Screening & Profiling

BPS Bioscience has developed innovative biochemical assays, cell-based assays, and screening services for investigating potential COVID-19 antiviral drugs. Identify antibodies or small molecule inhibitors that target either viral or host proteins.

- Screening and profiling services using our in-house developed assays
- Validation studies
- Custom development of biochemical and cell-based assays available

Biochemical and Cell-Based Assays

Use biochemical assays to examine the function of a protein or protein complex in a controlled *in vitro* format without influence from impurities or other proteins. On the other hand, cell-based assays can be used to evaluate protein function in the context of the whole cell or virus-cell interactions.

Biochemical



- Uses purified bioactive protein
- Available in a variety of formats, including no-wash homogenous assays for high throughput screening
- Buffers and substrates are optimized for use in the assay kit
- Useful for evaluating inhibitors of protein-protein interactions and inhibitors of viral enzymatic activities

Cell-Based



- Uses intact live cells
- Reporter cells and reporter kits are ideal for high throughput screening
- Effective for validating biochemical assay results
- Ideal for identifying inhibitors of infection

Our Deliverables to You



Detailed Results

Extensive report with raw and analyzed data, graphs, and detailed protocols. Typically includes positive controls for inhibition.



Fast Turnaround

Receive results within weeks after our receipt of your compounds.



Quality & Consistency

Proteins and enzymes synthesized and QC'd in-house to ensure the highest level of inter- and intra-assay consistency.



Extensive Selection

Choose from over 50 in-house developed coronavirus-relevant assays, including many novel assay kits for emerging variants.



Platform Options

Choose the format that works best for your experiment or perform orthogonal testing on multiple platforms to verify your results.



Protein Binding Studies - BLI Services

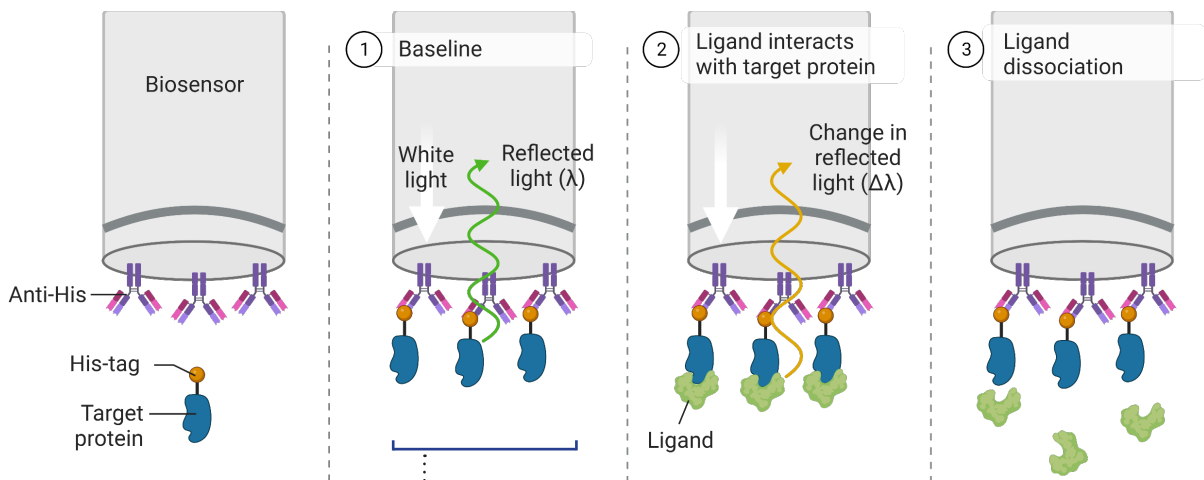
BPS Bioscience offers Bio-Layer Interferometry (BLI) services to evaluate and analyze protein interactions. Label-free analysis is a critical research method to determine the binding kinetic parameters of compounds or other binding partners. These studies are of key importance for pharmaceutical and biotechnological preclinical drug development.

Utilize our BLI services for deeper insight into your protein studies through measuring binding kinetics, steady state affinity, and through target validation. We will provide accurate and sensitive kinetic studies in a timely manner with detailed reports.

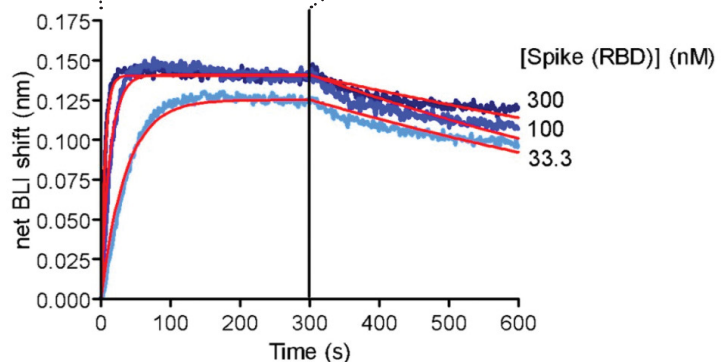
Available Services

- Protein immobilization
- Binding affinity measurements
- Data fitting and reporting
- Access to BPS Bioscience's extensive protein portfolio of target proteins
- Detailed final report includes all data, methods, and results

BLI Illustration Example:



BLI binding analysis of SARS-CoV-2 Spike (RBD) to immobilized ACE2-His (#11003) via anti-His antibody. $K_d = 1.2$ nM.



Antibodies	Catalog#	Assay Kits	Catalog#
Anti-Human IgG, Unconjugated Antibody	100736	Furin Protease Assay Kit	78040
Anti-Human IgM, Unconjugated Antibody	100737	IL-6:IL-6R Inhibitor Screening Assay Kit	78027
Anti-Nucleocapsid Antibody (SARS-CoV-2)	100861	Papain-like Protease (SARS-CoV-2) Assay Kit: Deubiquitinase Activity	79996
Anti-Spike S1 Monoclonal Antibody (SARS-CoV-2)	100715	Papain-like Protease (SARS-CoV-2) Assay Kit: Protease Activity	79995
Spike Neutralizing Antibody (Clone G10xA1) (SARS-CoV-2)	101326	Papain-like Protease Assay Buffer	78039
Spike Neutralizing Antibody (Clone G10xA5) (SARS-CoV-2)	101327	RdRp (SARS-CoV-2) TR-FRET Assay Kit	78553
Spike Neutralizing Antibody (Clone LxC1-G10) (SARS-CoV-2)	101246	SARS-CoV-1 Spike Trimer (S1+S2):ACE2 Inhibitor Screening Colorimetric Assay Kit	78012
Spike S1 Neutralizing Antibody (B.1.617.2, B.1.617.2.1, B.1.1.7, B.1.351, B.1.429, and P.1 Variants) (Clone C-A11) (SARS-CoV-2)	101024	SARS-CoV-2 IgG Detection Kit (Colorimetric Anti-Spike S1 RBD IgG detection)	79985
Spike S1 Neutralizing Antibody (SARS-CoV-2) (Clone: 414-1)	100793	SARS-CoV-2 IgG Detection Kit (Colorimetric Trimer Anti-Spike IgG detection)	79975
Spike S1 Neutralizing Antibody (SARS-CoV-2) (Clone: 414-2)	100792	SARS-CoV-2 Spike Trimer (S1+S2):ACE2 Inhibitor Screening Colorimetric Assay Kit	79999
Spike S1 Neutralizing Antibody (VHH), Fc-fusion (IgG1), Avi-Tag (SARS-CoV-1)	100784	Spike S1 (B.1.1.529 BA.1, Omicron Variant) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78358
Spike S1 Neutralizing Antibody (VHH), Fc-fusion (IgG1), Avi-Tag (SARS-CoV-1), Biotin-labeled	100785	Spike S1 (B.1.1.7, Alpha Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Chemiluminescence Assay Kit	78154
Spike Trimer Neutralizing Antibody (B.1.617.2, B.1.617.2.1, WT and B.1.1.7 Variants) (Clone hC-A11) (SARS-CoV-2)	101061	Spike S1 (B.1.1.7, Alpha Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78155
		Spike S1 (B.1.1.7; Alpha Variant) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78282
		Spike S1 (B.1.351; Beta Variant) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78287
		Spike S1 (B.1.429; Epsilon Variant) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78292
		Spike S1 (B.1.617 Variant) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78288
		Spike S1 (B.1.617.1; Kappa Variant) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78283
		Spike S1 (B.1.617.2.1; Delta Plus Variant) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78295
		Spike S1 (B.1.617.2; Delta Variant) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78291
		Spike S1 (B.1.618 Variant) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78289
		Spike S1 (K417T, E484K, N501Y) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78293
		Spike S1 (P.1; Gamma Variant) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78284
		Spike S1 (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	79954
		Spike S1 (Wild-Type) (SARS-CoV-2): ACE2 TR-FRET Assay Kit	78281
		Spike S1 RBD (B.1.1.529 BA.1, Omicron Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Chemiluminescence Assay Kit	78357
		Spike S1 RBD (B.1.1.529 BA.1, Omicron Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78339
		Spike S1 RBD (B.1.1.7, Alpha Variant) (N501Y) (SARS-CoV-2): ACE2 Inhibitor Screening Chemiluminescence Assay Kit	78140
		Spike S1 RBD (B.1.1.7, Alpha Variant) (N501Y) (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78133
Assay Kits	Catalog#		
3CL Protease (B.1.1.529, Omicron Variant) (SARS-CoV-2) Assay Kit	78350		
3CL Protease (MERS-CoV) Assay Buffer	78022		
3CL Protease (MERS-CoV) Inhibitor Screening Assay Kit	78278		
3CL Protease (SARS-CoV-1) Assay Kit	78015		
3CL Protease Assay Buffer	79956		
3CL Protease, MBP-tagged (SARS-CoV-2) Assay Kit	79955		
3CL Protease, Untagged (SARS-CoV-2) Assay Kit	78042		
3x ACE2-Spike TR-FRET Buffer	79953		
ACE2 Inhibitor Screening Assay Kit	79923		
ACE2: Spike S1 RBD (SARS-CoV-2) Inhibitor Screening Assay Kit	79936		
ACE2: Spike S1 RBD, Mouse Fc-fusion (SARS-CoV-2) Inhibitor Screening Colorimetric Assay Kit	78031		
ACE2: Spike S1-Biotin (SARS-CoV-2) Inhibitor Screening Assay Kit	79945		
Cathepsin B Inhibitor Screening Assay Kit	79590		
Cathepsin L Inhibitor Screening Assay Kit	79591		

Assay Kits	Catalog#	Lentiviruses	Catalog#
Spike S1 RBD (B.1.351, Beta Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Chemiluminescence Assay Kit	78151	Bald Lentiviral Pseudovirion (Luciferase Reporter)	79943
Spike S1 RBD (B.1.351, Beta Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78152	Spike (B.1.1.529 BA.1, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78349
Spike S1 RBD (B.1.617.2; Delta Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78277	Spike (B.1.1.529 BA.1, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (Luc Reporter)	78348
Spike S1 RBD (SARS-CoV-2): ACE2 Inhibitor Screening Assay Kit	79931	Spike (B.1.1.7, Alpha Variant) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78158
Spike S1 RBD (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78018	Spike (B.1.1.7, Alpha Variant) (SARS-CoV-2) Pseudotyped Lentivirus (Luc Reporter)	78112
Spike S1-Biotin (SARS-CoV-2): ACE2 TR-FRET Assay Kit	79949	Spike (B.1.351, Beta Variant) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78160
Spike Trimer (S1+S2) (B.1.1.529 BA.1, Omicron Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Chemiluminescence Assay Kit	78369	Spike (B.1.351, Beta Variant) (SARS-CoV-2) Pseudotyped Lentivirus (Luc Reporter)	78142
Spike Trimer (S1+S2) (B.1.1.529 BA.1, Omicron Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78365	Spike (B.1.429, Epsilon Variant) Pseudotyped Lentivirus (Luc Reporter)	78172
Spike Trimer (S1+S2) (B.1.1.7, Alpha Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78175	Spike (B.1.617 Variant) Pseudotyped Lentivirus (Luc Reporter)	78204
Spike Trimer (S1+S2) (B.1.351, Beta Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78174	Spike (B.1.617.1, Kappa Variant) Pseudotyped Lentivirus (Luc Reporter)	78205
Spike Trimer (S1+S2) (B.1.617.2.1; Delta Plus Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78276	Spike (B.1.617.2.1; Delta Plus Variant) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78219
Spike Trimer (S1+S2) (B.1.617.2; Delta Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78275	Spike (B.1.617.2.1; Delta Plus Variant) Pseudotyped Lentivirus (Luc Reporter)	78218
Spike Trimer (S1+S2) (P.1; Gamma Variant) (SARS-CoV-2): ACE2 Inhibitor Screening Colorimetric Assay Kit	78274	Spike (B.1.617.2; Delta Variant) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78216
TMPRSS2 Fluorogenic Assay Kit	78083	Spike (B.1.617.2; Delta Variant) Pseudotyped Lentivirus (Luc Reporter)	78215
		Spike (B.1.618 Variant) Pseudotyped Lentivirus (Luc Reporter)	78206
		Spike (B.1.621, Mu Variant) (SARS-CoV-2) Pseudotyped Lentivirus (Luc Reporter)	78618
		Spike (BA.1.1, Omicron Variant R346K) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78624
		Spike (BA.1.1, Omicron Variant R346K) (SARS-CoV-2) Pseudotyped Lentivirus (Luc Reporter)	78623
		Spike (BA.2, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78626
		Spike (BA.2, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (Luc Reporter)	78625
		Spike (BA.2.12.1, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78646
		Spike (BA.2.12.1, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (Luc Reporter)	78645
		Spike (BA.4/5, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78652
		Spike (BA.4/5, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (Luc Reporter)	78651
		Spike (BF.7, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78702
		Spike (BF.7, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (Luciferase Reporter)	78699
		Spike (BQ.1, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78700
		Spike (BQ.1, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (Luciferase Reporter)	78697
		Spike (BQ.1.1, Omicron Variant) (SARS-CoV-2) Pseudotyped Lentivirus (eGFP Reporter)	78701

Proteins	Catalog#	Proteins	Catalog#
Spike S1 (13-665), Fc fusion, Avi-tag, Biotin-Labeled (SARS-CoV-2) Recombinant	100679	Spike S1 RBD (K417T, E484K, N501Y), Avi-His-Tag (SARS-CoV-2) Recombinant	100993
Spike S1 (16-685), Avi-His-tag (SARS-CoV-2) Recombinant	100730	Spike S1 RBD (V367F), Avi-His-tag (SARS-CoV-2) HiP™ Recombinant	100769
Spike S1 (16-685), Avi-His-Tag, Biotin-Labeled (SARS-CoV-2) Recombinant	100731	Spike S1 RBD (V367F), Avi-His-tag Biotin-labeled (SARS-CoV-2) Recombinant	100770
Spike S1 (16-685), Fc fusion (SARS-CoV-2) Recombinant	100688	Spike S1 RBD (V483A), Avi-His-tag (SARS-CoV-2) Recombinant	100846
Spike S1 (16-685), Fc Fusion, Avi-tag (SARS-CoV-2) Recombinant	100719	Spike S1 RBD, Avi-His-tag (SARS-CoV-2) Recombinant	100696
Spike S1 (16-685), Fc Fusion, Avi-tag, Biotin-labeled (SARS-CoV-2) Recombinant	100720	Spike S1 RBD, Avi-His-tag, Biotin-labeled (SARS-CoV-2) Recombinant	100697
Spike S1 (B.1.1.529 BA.1, Omicron Variant), Avi-His-Tag, (SARS-CoV-2) Recombinant	101333	Spike S1 RBD, Fc fusion (SARS-CoV-2) Recombinant	100699
Spike S1 (B.1.1.529 BA.1, Omicron Variant), Avi-His-Tag, Biotin-Labeled (SARS-CoV-2) Recombinant	101334	Spike S1 RBD, Fc-Fusion, Avi-Tag (SARS-CoV-2) Recombinant	100698
Spike S1 (B.1.1.7, Alpha Variant), Avi-His-Tag (SARS-CoV-2)	101001	Spike S1 RBD, Fc-Fusion, Avi-Tag, Biotin-labeled (SARS-CoV-2) Recombinant	100695
Spike S1 (B.1.351, Beta Variant), Avi-His-Tag (SARS-CoV-2) Recombinant	100992	Spike S1 RBD, His-Avi-Tag, Biotin-Labeled (SARS-CoV-2) Recombinant	100937
Spike S1 (B.1.429 Variant), Avi-His-Tag (SARS-CoV-2) Recombinant	101130	Spike S1 RBD, Mouse Fc-fusion (SARS-CoV-2) Recombinant	100684
Spike S1 (B.1.617.1; Kappa Variant), Avi-His-Tag, Biotin-Labeled (SARS-CoV-2) Recombinant	101125	Spike S1 RBD-Nucleocapsid Protein Chimera (SARS-CoV-2)	100938
Spike S1 (B.1.617.2, Delta Variant) Avi-His-Tag (SARS-CoV-2) Recombinant	101151	Spike S1, Avi-His-Tag, iFluor-488-labeled (SARS-CoV-2) Recombinant	100936
Spike S1 (B.1.617.2, Delta Variant) Avi-His-Tag, Biotin-Labeled (SARS-CoV-2) Recombinant	101152	Spike S2, Fc-Tag (SARS-CoV-2) Recombinant	100895
Spike S1 (B.1.617.2.1, Delta Plus Variant) Avi-His-Tag (SARS-CoV-2) Recombinant	101179	Spike Trimer (S1+S2) (B.1.1.529 BA.1, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101343
Spike S1 (B.1.617.2.1, Delta Plus Variant) Avi-His-Tag, Biotin-Labeled (SARS-CoV-2) HiP™ Recombinant	101180	Spike Trimer (S1+S2) (B.1.1.7, Alpha Variant), His-Tag (SARS-CoV-2) Recombinant	510334
Spike S1 (B.1.618 Variant), Avi-His-Tag (SARS-CoV-2) Recombinant	101126	Spike Trimer (S1+S2) (B.1.351, Beta Variant), His-Tag (SARS-CoV-2) Recombinant	510333
Spike S1 (K417T, E484K, N501Y), Avi-His-Tag (SARS-CoV-2) Recombinant	101081	Spike Trimer (S1+S2) (B.1.351, Beta Variant, Δ242-244) (SARS-CoV-2) Recombinant	101091
Spike S1 (K417T, E484K, N501Y), Avi-His-Tag, Biotin-Labeled (SARS-CoV-2) Recombinant	101082	Spike Trimer (S1+S2) (B.1.429, Epsilon Variant) His-Tag (SARS-CoV-2) Recombinant	101057
Spike S1 (P.1 Variant), Avi-His-Tag, Biotin-Labeled (SARS-CoV-2) Recombinant	101080	Spike Trimer (S1+S2) (B.1.617 Variant), His-Tag (SARS-CoV-2) Recombinant	101143
Spike S1 (P.1, Gamma Variant), Avi-His-Tag (SARS-CoV-2) Recombinant	101079	Spike Trimer (S1+S2) (B.1.617.1, Kappa Variant), His-Tag (SARS-CoV-2) Recombinant	101144
Spike S1 RBD (B.1.1.7; Alpha Variant), Avi-His-Tag, Biotin-Labeled (SARS-CoV-2) HiP™ Recombinant	100999	Spike Trimer (S1+S2) (B.1.617.2.1, Delta Plus Variant), His-Tag (SARS-CoV-2) Recombinant	101165
Spike S1 RBD (B.1.617 Variant), Avi-His-Tag (SARS-CoV-2) HiP™ Recombinant	101156	Spike Trimer (S1+S2) (B.1.617.2; Delta Variant), His-Tag (SARS-CoV-2) Recombinant	101147
Spike S1 RBD (B.1.617.2, Delta Variant), Avi-His-Tag (SARS-CoV-2) HiP™ Recombinant	101153	Spike Trimer (S1+S2) (B.1.618 Variant), His-Tag (SARS-CoV-2) Recombinant	101145
Spike S1 RBD (B.1.617.2, Delta Variant), Avi-His-Tag, Biotin-Labeled (SARS-CoV-2) Recombinant	101154	Spike Trimer (S1+S2) (BA.2, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101701
Spike S1 RBD (B.1.617.2.1, Delta Plus Variant), Avi-His-Tag (SARS-CoV-2) HiP™	101181	Spike Trimer (S1+S2) (BA.2.3.20, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101654
Spike S1 RBD (B.1.617.2.1, Delta Plus Variant), Avi-His-Tag, Biotin-Labeled (SARS-CoV-2) HiP™ Recombinant	101182	Spike Trimer (S1+S2) (BA.2.75, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101655
Spike S1 RBD (B.1.618 Variant), Avi-His-Tag (SARS-CoV-2) Recombinant	101158	Spike Trimer (S1+S2) (BA.2.75.2, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101656
Spike S1 RBD (G476S), Avi-His-tag (SARS-CoV-2) Recombinant	100868	Spike Trimer (S1+S2) (BA.2.75.2, Omicron Variant+K444T), His-Tag (SARS-CoV-2)	101657

Proteins	Catalog#
Spike Trimer (S1+S2) (BA.2.75.2, Omicron Variant+V445P+F490S), His-Tag (SARS-CoV-2)	101658
Spike Trimer (S1+S2) (BA.4.6, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101664
Spike Trimer (S1+S2) (BA.5, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101662
Spike Trimer (S1+S2) (BF.7/BA.5.2.6/BF.11, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101663
Spike Trimer (S1+S2) (BN.1, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101659
Spike Trimer (S1+S2) (BQ.1, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101665
Spike Trimer (S1+S2) (BQ.1.1, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101666
Spike Trimer (S1+S2) (BR.2.1, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101715
Spike Trimer (S1+S2) (CA.3.1, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101704
Spike Trimer (S1+S2) (CH.1.1, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101703
Spike Trimer (S1+S2) (D614G), His-tag (SARS-CoV-2) Recombinant	100810
Spike Trimer (S1+S2) (K417T, E484K, N501Y), His-Tag (SARS-CoV-2) Recombinant	100988
Spike Trimer (S1+S2) (P.1 Variant), His-Tag (SARS-CoV-2) Recombinant	100989
Spike Trimer (S1+S2) (XBB, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101660
Spike Trimer (S1+S2) (XBB.1, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101661
Spike Trimer (S1+S2) (XBB.1.5, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101677
Spike Trimer (S1+S2) (XBF, Omicron Variant), His-Tag (SARS-CoV-2) Recombinant	101702
Spike Trimer (S1+S2), His-tag (HCoV-NL63) Recombinant	100788
Spike Trimer (S1+S2), His-tag (SARS-CoV-1) Recombinant	100789
Spike Trimer (S1+S2), His-tag (SARS-CoV-2) Recombinant	100728
Spike Trimer (S1+S2), His-tag, Eu-labeled (SARS-CoV-2) Recombinant	100894

Substrates	Catalog#
3CL Protease (SARS-CoV-1 / SARS-CoV-2) Substrate	79952
3CL Protease (MERS-CoV) Substrate	78021
3CL Protease Fluorogenic Standard	78006
HRP Colorimetric Substrate	79651
PLPro Substrate	79997

VSV	Catalog#
Bald VSV Delta G (Luciferase Reporter)	78636
Spike (B.1.617.2, Delta Variant) (SARS-CoV-2) Pseudotyped VSV Delta G (Luciferase Reporter)	78640
Spike (BA.1.1, Omicron Variant) (SARS-CoV-2) Pseudotyped VSV Delta G (Luciferase Reporter)	78641
Spike (BA.2, Omicron Variant) (SARS-CoV-2) Pseudotyped VSV Delta G (Luciferase Reporter)	78635
Spike (BA.2.12.1, Omicron Variant) (SARS-CoV-2) Pseudotyped VSV Delta G (Luciferase Reporter)	78643
Spike (BA.4/5, Omicron Variant) (SARS-CoV-2) Pseudotyped VSV Delta G (Luciferase Reporter)	78644
Spike (D614G) (SARS-CoV-2) Pseudotyped VSV Delta G (Luciferase Reporter)	78642
Spike (SARS-CoV-2) Pseudotyped VSV Delta G (Luciferase Reporter)	78637
VSV-G Pseudotyped VSV Delta G (Luciferase Reporter)	78634



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