



# Bio-Medicine Reagents

Quality builds trust, Technology leads innovation

Innovative materials & Detection reagents  
Empowering the future of bio-medicine

For Science For Health

# About Vazyme Bio-medicine

Focusing on the entire process of pharmaceutical and vaccine companies in the R&D-clinical-production stages, we provide customers with GMP-grade raw materials, drug R&D reagents and quality control reagents through a combination of various technologies such as enzyme directed evolution technology platform, single B cell antibody screening platform, and comprehensive analysis platform, helping customers improve R&D/production efficiency and success rate, reduce production costs, and establish a stable and secure supply chain system.



## Quality Management System



- ◆ GMP level factory **10000 m<sup>2</sup>**  
Based on ISO9001, ISO14001, ISO45001 management system
- ◆ Multifunctional QC inspection laboratory **1000 m<sup>2</sup>**  
100+ Physicochemical analytical methods for pharmacopoeia verification
- ◆ FDA DMF Filing **10+**      ◆ Assist clients to obtain IND approval **80+**

### ■ GMP for mRNA therapy

	Activity/Function	✓
	Animal Origin Free	✓
	Ampicillin Free	✓
Contamination testing for	Nuclease	✓
	Bioburden	✓
	Host Cell DNA	✓
	Endotoxin	✓
Documentation Available Upon Request	Certificate of Analysis	✓
	Certificate of Origin	✓
	TSE/BSE Statement	✓



## Content

### Solution for mRNA Vaccine/Drug

mRNA Research & Development	6
mRNA CMC	8
LNP Research & Development	12

### Solution for Antibody Drug

Research & Development	13
Antibody Discovery	
CMC	16
Manufacturing Process Development	
QC (DS/DP)	
Preclinical Research	19
Pharmacodynamics (PD)	
Pharmacokinetics (PK)	
Clinical & Commercialization	25
Immunogenicity Test	
Batch Release Test	

### Solution for Small Molecule Drug

Discovery & Development	27
High-Throughput Screening	

# Solution for mRNA Vaccine/Drug

mRNA is currently recognized as a relatively safe drug carrier, which has a strong flexibility in the prevention and treatment of diseases. In addition to infectious disease vaccines including COVID-19, mRNA has also been identified and applied to a number of therapies, such as systemic secretion, cell therapy, tumor vaccines, intratumoral immuno-oncology therapy, local regenerative therapy, etc.

mRNA		
Discovery and Development	CMC	
Sequence Screening & Optimization	Manufacturing Process Development	Quality Control
T7 Synthesis Kit T7 Variants Toolbox	GMP-Grade Raw Materials	mRNA QC Reagents
Cat.No.DD42/ DD41	Cat.No.GMP4	Cat.No.DD35

LNP	
Research & Development	
LNP-Screening Solution	ILNP solution
Stock mRNA Reporter Gene Assay Reagent	IgG Quantitative Detection
Cat.No.DD45/ DD12	Cat.No.DD21

## mRNA Research & Development

### T7 RNAP Variants Toolbox

Multiple T7 RNA-directed evolution to aid new RNA synthesis scenarios

	Product Name	Cat.No.	Size
T7 RNAP Variants	T7 RNA Polymerase Variants Toolbox	DD4126-01/02/03	100 µl/1 ml/5 ml
T7 Synthesis Kit	T7 High Yield RNA Transcription Kit	DD4201	50 rxns

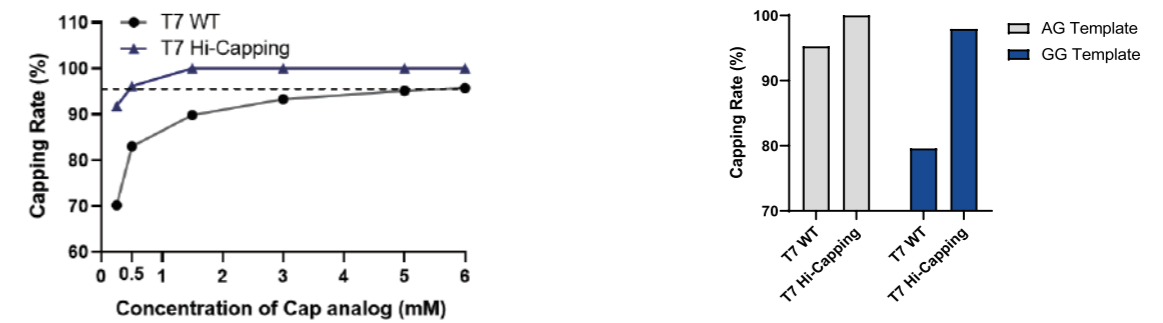
## T7 RNAP Variants Toolbox

### Product Overview

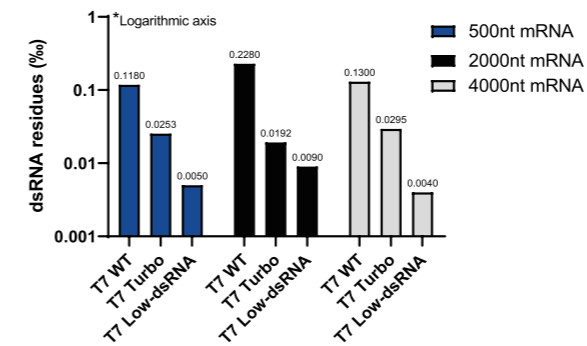
New T7 RNAP for IVT. Vazyme has developed a series of T7 RNA polymerase variants with single or combined functionalities, such as thermostability, reduced dsRNA production, improved capping efficiency, improved integrity, and higher specific activity, to meet diverse downstream RNA synthesis needs. Utilizing proprietary raw materials and process optimization strategies to assist partner companies in R&D and CMC development.

### Data Presentation

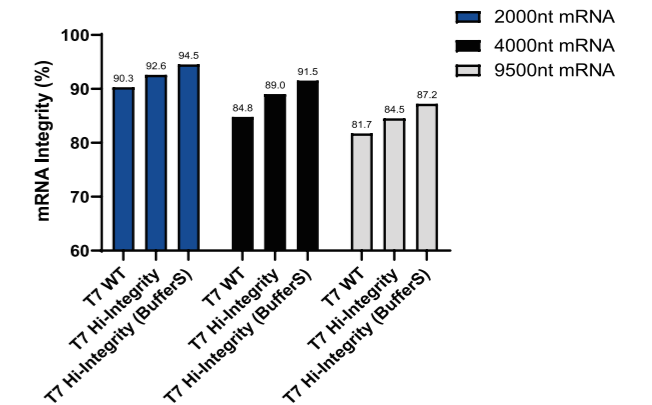
#### T7 High-Capping RNA Polymerase



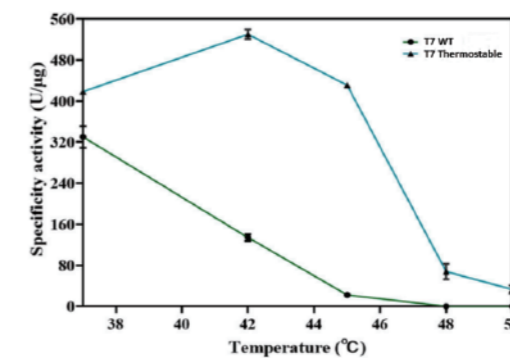
#### T7 Low-dsRNA RNA Polymerase



#### T7 High-Integrity RNA Polymerase



#### T7 Thermostable RNA Polymerase



**mRNA CMC**

**■ GMP-Grade Raw Materials**

After screening T7 RNAP mutants and optimizing the transcription reaction system, high-yield and high-purity mRNA was obtained using linear double-stranded DNA containing the T7 promoter sequence as a template and NTPs as a substrate for transcription.

**■ mRNA QC Reagents**

In the production of mRNA vaccine drugs, residues of by-products and other impurities, such as dsRNA, T7 RNAP, etc., will affect the quality and safety of the final product. Drug regulatory agencies in various countries require precise quality analysis and control.

	Product Name	Cat.No.	Size
GMP-Grade Raw Materials	T7 Turbo RNA Polymerase (200 U/μl, GMP Grade)	GMP4120PB	1 /5 /20 ml
	T7 RNA Polymerase (200 U/μl, GMP Grade)	GMP4101PB	1 /5 /20 ml
	Murine RNase Inhibitor (40 U/μl, GMP Grade)	GMP4102PA	1 /5 /20 ml
	Pyrophosphatase, Inorganic (yeast, 0.1 U/μl, GMP Grade)	GMP4103PC	1 /5 /20 ml
	DNase I (1 U/μl, GMP Grade)	GMP4104PC	1 /5 /20 ml
	10× Transcription Buffer (GMP Grade)	GMP4101R	1 /5 /20 ml
mRNA QC Reagents	EasyAna dsRNA (Modified) Quantitative Detection Kit2.0	DD3509EN	96 tests
	EasyAna T7 RNA Polymerase Quantitative Detection Kit	DD3504EN	96 tests
	Double-stranded RNA (dsRNA) (Standard)	DD3413	200 ul
	dsRNA-Pseudouridine-U (Standard)	DD3436	200 ul
	dsRNA-N1-me-pseudo-U(Standard)	DD3437	200 ul

**T7 Turbo RNA Polymerase (200 U/μl, GMP Grade)**

**Product Overview**

T7 Turbo RNA polymerase, a protein encoded by the bacteriophage T7 DNA expressed in the recombinant *E.coli*, is a mutant T7 RNA polymerase suitable for mRNA therapeutic research and development. In vitro transcription with T7 Turbo RNA Polymerase efficiently produces high-quality mRNA while minimizing the presence of dsRNA impurities.

**Product Feature**

- Dramatically reduce dsRNA
- Improve the utilization rate of cap analogue
- Guarantee mRNA CQA standard

**Data Presentation**

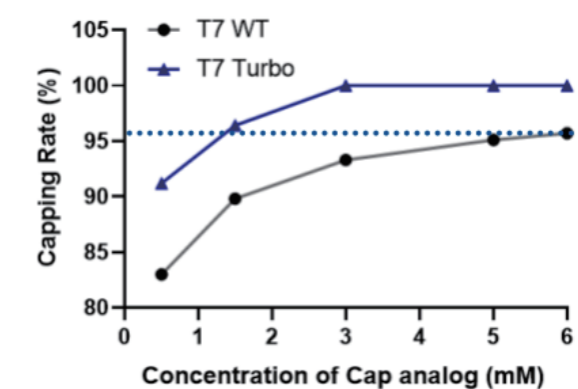
**Low dsRNA**

significantly reduce dsRNA content by ~10-fold, without any negative effects on yield and integrity

mRNA Length	980 nt		2,000 nt		4,500 nt	
	WT	Turbo	WT	Turbo	WT	Turbo
T7 RNAP						
Yield (mg/ml)	7.8	7.8	8.1	8.2	8.6	8.5
dsRNA/mRNA(10 <sup>-6</sup> )	128	20	683	54	152	17
dsRNA Reduction		6.4×		12.6×		8.9×
Capping Rate (%)	95.3	99.0	96.3	99.0	93.2	98.7
Integrity (%)	97.0	96.9	96.6	97.1	93.4	95.3

**Cost saving**

T7 Turbo can save 75% cap1 usage at same capping rate



## EasyAna dsRNA (Modified) Quantitative Detection Kit (ELISA) 2.0

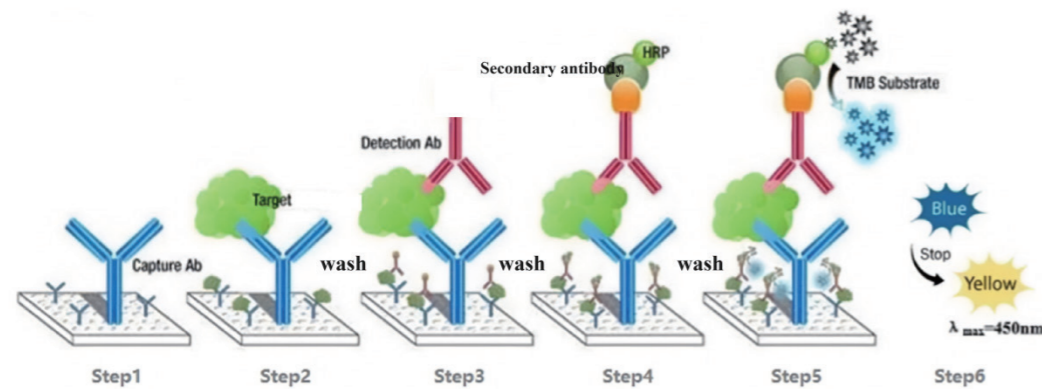
### Product Overview

EasyAna dsRNA (Modified) Quantitative Detection Kit (ELISA) 2.0 is developed based on a double-antibody sandwich ELISA platform to quantitatively detect the amount of dsRNA in the IVT product or synthesized mRNA solution. Experimenters can save over 20 hours of coating time and improve the analysis precision using the pre-coated ELISA plate to reduce the impact of manual coating process. Highly stable and repeatable results are much easier to get by using this kit.

### Product Feature

- Easy-to-operate
- Compatible with different dsRNA sequences
- Verified by ICH guidelines M10 on Bioanalytical Method Validation

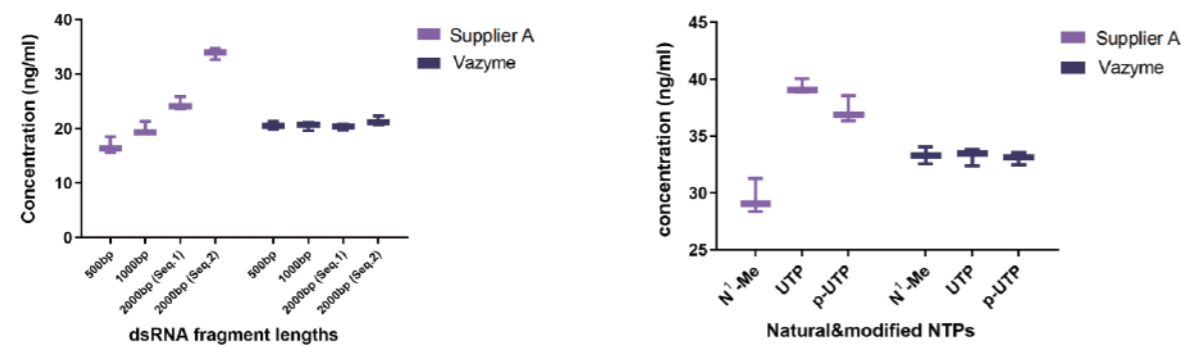
### Detection Principle



### Data Presentation

#### Compatible with different dsRNA sequences

Bid farewell to the hassles of extensive sequence corrections, reduce the R&D and validation efforts.

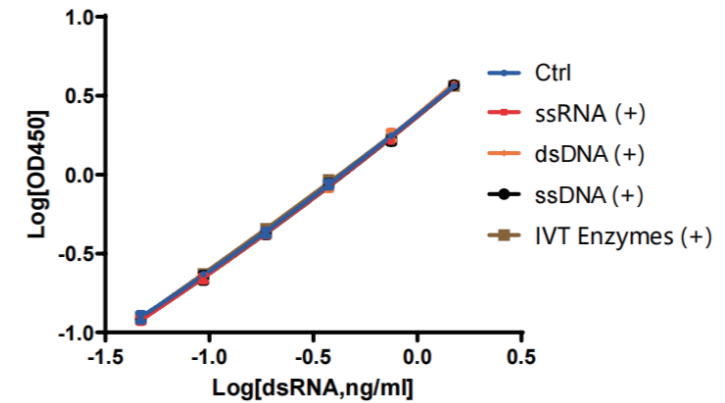


### Excellent Performance

Methodology	ELISA		Dot Blot
	M2/M5	Supplier S	
	Quantitative	Quantitative	Semi-Quantitative
LOD	10 pg/ml	500 pg/ml	6.25 ng/ml
LOQ	46 pg/ml	1.25 ng/ml	400 ng/ml
RSD	2%-9%	5%-29%	6%-48%

### Precisely identify dsRNA

The IVT enzymes used in the process of mRNA preparation and other forms of nucleic acids such as ssRNA, dsDNA, ssDNA have no interference with its detection



### Reference

Liu, J., Zheng, T., Xu, L., Chen, Z., Zhang, K., Wang, X., Xu, X., Li, Y., Sun, Y. and Zhu, L., 2024. An improved method for the detection of double-stranded RNA suitable for quality control of mRNA vaccines.

### Related Products

Sort	Product Name	Cat.No.	Size
RNA Clean-Up Beads	VAHTS RNA Clean Beads	N412	5 ml/40 ml/450 ml

## LNP Discovery and Development

### ■ Stock mRNA

After modified in vitro transcription synthesis, capping and tailing, mRNA stock expressing fluorescent proteins is obtained. Available for delivery screening and positive controls.

### ■ Reporter Gene Assay Reagent

As a substrate for Luc mRNA transfected cells for quantitative detection of protein expression.

### ■ In vivo imaging Assay

As a substrate for Luc mRNA *in vivo* experiments, quantitative detection of protein expression.

### ■ IgG Quantitative Detection

Evaluating the delivery efficiency of cell therapy *in vivo* by quantifying the binding rate of tLNPs and external targeting antibodies.

Sort	Product Name	Cat.No.	Size
Stock mRNA	EGFP mRNA	DD4503	20ug/100ug/1mg
	Firefly Luciferase mRNA	DD4511	20ug/100ug/1mg
Reporter Gene Assay Reagent	Bio-Lite Luciferase Assay System	DD1201-01/02/03	10/10×10/100 ml
In vivo imaging Assay	D-Luciferin, Potassium Salt	DD1210-01/02/03	10 mg/100 mg/1 g
IgG Quantitative Detection	Add&Read Human IgG Kit	DD2101-01/02	500/10,000 tests
	Add&Read Human Fc Kit	DD2102-01/02	500/10,000 tests
	Add&Read Human Fc Kit (broad range)	DD2103-01/02	500/10,000 tests
	Add&Read Mouse Fc Kit	DD2105-01/02	500/10,000 tests

## Solution for Antibody Drug

In antibody drug R&D, assay development is vital in antibody discovery stage and other stages. Common assays such as antibody quantification, binding affinity/specificity and biological activity assay. To ensure the quality of drug product (DP), utilize an more accurate, faster and high throughput methodology for assay development is very important to antibody drug R&D.

Vazyme based on firefly luciferase and fluorescence resonance energy transfer (FRET) methodologies established luciferase reporter system platform and Add&Read TR-FRET "no wash ELISA" platform. We can offer comprehensive antibody drugs R&D solutions from antibody discovery to clinical trials&commercialization for the pharmaceutical industry and biotech. The table below shows details.

Antibody Drug Development Solution			
Discovery and Development	CMC	Preclinical Research	Clinical & Commercial
Antibody Discovery	Manufacturing Process Development/ QC	Pharmacodynamics/ Pharmacokinetics	Immunogenicity/ Batch Release Test
IgG Quantitative Detection	IgG Quantitative Detection Cell Viability Detection Reagent Reporter Gene Assay Reagent Human Cytokines Quantitative Assay Kit	Cell Viability Detection Reagent Reporter Gene Assay Reagent IgG Quantitative Detection Human Cytokines Quantitative Assay Kit In vivo imaging Assay	Cell Viability Detection Reagent Reporter Gene Assay Reagent
Cat.No. DD21	Cat.No. DD11/ DD12/ DD21/DD27	Cat.No. DD11/ DD12/ DD21/ DD27	Cat.No. DD11/ DD12

## Discovery & Development

### Antibody Discovery

Antibody discovery involves the application of structural computation and library generation to screen properties of antibody and antibody-like molecules for downstream research approaches.



Main processes of antibody discovery

Hybridoma cell screening is a common approach to achieve hits antibody. Since César Milstein and Georges J. F. Köhler invented hybridoma technology in 1975, it has been widely used in antibody discovery. The hits antibody maybe lost when we culture the hybridoma cells for a long time. To recover the hits antibody, we provide Add&Read Mouse Fc Kit, it will help you to screening the hybridoma cell which can secrete mAb.

Sort	Product Name	Cat.No.	Size
IgG Quantitative Detection	Add&Read Mouse Fc Kit	DD2105-01/02	500/10,000 tests

## Add&Read Mouse Fc Kit

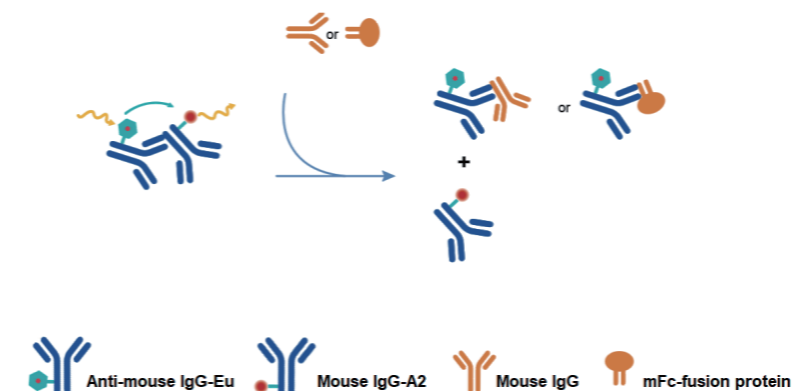
### Product Overview

The Mouse Fc Kit can be used for high-throughput detection of the concentration for Mouse IgG or mFc fusion protein in cell supernatant or after purification.

### Product Feature

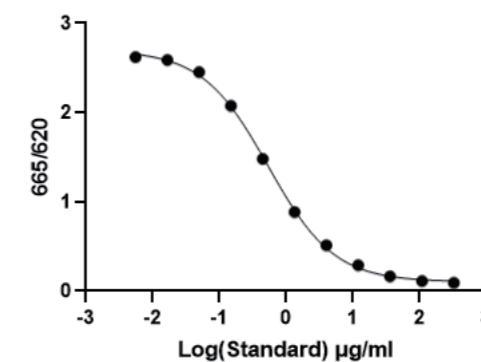
- Sandwich method, detection of monoclonal antibodies
- Good subtype compatibility
- High sensitivity

### Detection Principle



### Data Presentation

The standard curve between 0.0055~324 µg/mL. This kit is suitable for screening of hybridoma cells with low expression levels.





**CMC**

Manufacturing, and Control (CMC) activities necessary to successfully advance new antibody drug from discovery to First-in-Human clinical trials and the market as quickly and economically as possible. The main steps are shown below.



**Manufacturing Process Development**

The expression of recombinant therapeutic proteins for clinical and commercial production requires the stable integration of gene of interest (GOI) into the CHO genome. The most common approach is to randomly integrate GOI into the host genome as part of a plasmid and then screen transgenic cells. Isolation and expanding individual high-yield cells into a population of highly expressing cells with clonal properties are necessary. Our Add&Read Human Fc Kit (broad range) have a broader detection range which means you don't need to dilute your sample.

Sort	Product Name	Cat.No.	Size
IgG Quantitative Detection	Add&Read Human IgG Kit	DD2101-01/02	500/10,000 tests
	Add&Read Human Fc Kit	DD2102-01/02	
	Add&Read Human Fc Kit (broad range)	DD2103-01/02	

## Add&Read Human Fc Kit (broad range)

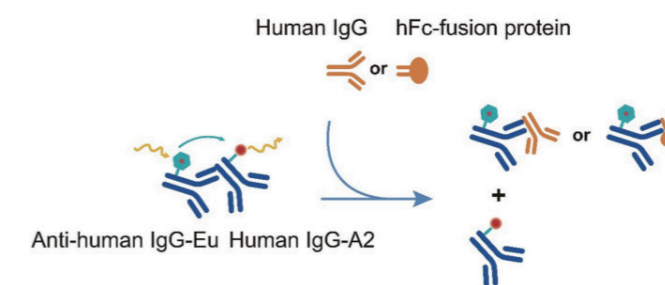
**Product Overview**

The standard curve range of Add&Read Human Fc Kit (broad range) is 0.049-2916 µg/ml, and the concentration in the linear region can reach 324 µg/ml. There is no need to dilute sample when use it. The cell supernatant can be directly detected. It can be used to detect the concentration of human IgG, hFc-fusion protein (hFc-fusion protein) and bispecific antibodies in the cell supernatant or after purification.

**Product Feature**

- **Competitive method:** detection of monoclonal antibodies, bispecific antibodies, Fc fusion proteins
- **Good subtype compatibility**
- **Wider detection range:** without the need for dilution

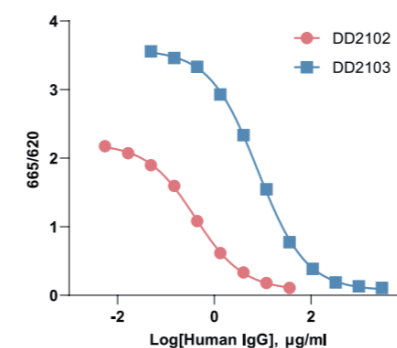
**Detection Principle**



**Data Presentation**

**With a wider detection range, no need to dilute the sample in advance**

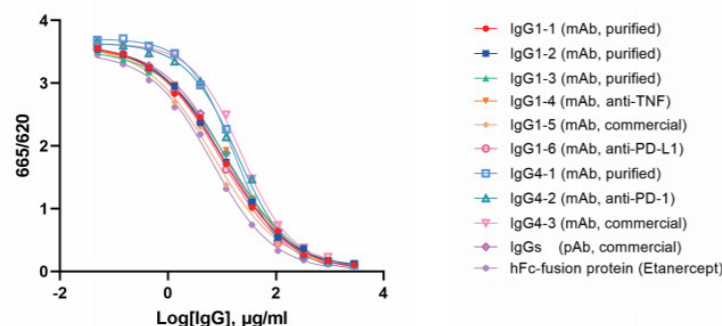
The standard curve range of Human Fc Kit (DD2102) is 0.0055-36 µg/ml. After optimization, the standard curve range of Human Fc Kit (broad range) (DD2103) is 0.049-2916µg/ml, and the concentration in the linear region can reach 324 µg/ml.



No.	[Human IgG] µg/ml	665/620	
		DD2102	DD2103
Std 0	0	2.1775	3.5354
Std 1	0.0055	2.1732	-
Std 2	0.0165	2.0716	-
Std 3	0.049	1.8964	3.5574
Std 4	0.148	1.5955	3.4611
Std 5	0.444	1.0831	3.3311
Std 6	1.333	0.6163	2.9276
Std 7	4	0.3336	2.3356
Std 8	12	0.1804	1.5466
Std 9	36	0.1095	0.7757
Std 10	108	-	0.3861
Std 11	324	-	0.189
Std 12	972	-	0.1308
Std 13	2916	-	0.1077

### Good subtype compatibility

Using Human Fc Kit (broad range) to detect the purified protein, different subtypes and different types of antibodies have good consistency. The results are shown below.



### ■ QC (DS/DP)

Biologic drug development consists of two fundamental components: the drug substance (DS) development, which can include the master and working cell bank development, manufacturing process development, and scale-up; and the drug product (DP) development, which includes the filling of the drug substance into the primary container. We need to detect the drug efficacy by cell-based assay. As mentioned below, we can provide the following products.

Sort	Product Name	Cat.No.	Size
Cell Viability Detection Reagent	CellCounting-Lite 2.0 Luminescent Cell Viability Assay	DD1101-01/02/03	10/100/400 ml
	CellCounting-Lite 3D Luminescent Cell Viability Assay	DD1102-01/02/03	
Reporter Gene Assay Reagent	Bio-Lite Luciferase Assay System	DD1201-01/02/03	10/10×10/100 ml
Human Cytokines Quantitative Assay Kit	Add&Read Human IL6 Quantitative Detection Kit(Customized)	DD2703-C-01/02/03	96/500/10,000 tests
	Add&Read Human TNF alpha Quantitative Detection Kit(Customized)	DD2704-C-01/02/03	
	Add&Read Human IL2 Quantitative Detection Kit	DD2705-01/02/03	
	Add&Read Human IFN gamma Quantitative Detection Kit	DD2706-01/02/03	
	Add&Read Human IL8 Quantitative Detection Kit	DD2709-01/02/03	

### Preclinical Research

#### ■ Pharmacodynamics (PD)

Pharmacodynamics (PD) is the study of the biochemical and physiologic effects of drugs. In early stage of antibody drug of concept exploration, *in vitro* efficacy evaluation assay is essential. According to different antibody drug types, we can provide various cell-based assays.

Monoclonal Antibody/Bispecific monoclonal antibody: When mAb or BsAb binds to tumor-associated antigen (TAA), it can recruit immune cells and ADCC/ADCP effect will kill the tumour cells. We offer a single luciferase assay system for the ADCC or ADCP pharmacological test.

Antibody–drug conjugate (ADC): ADC is the combination of both antibody and the cytotoxic payload which conjugated by linker. It's always by targeted to the surface antigen and being endocytosis, and then the payload will be release and just kill the cells. We offer luciferase assay system for detection of bystander effects and cell viability assay.

T-cell engagers (TCEs)/autoimmune disease antibody: Another PD research is to detect cytokine, for some modalities like the TCEs or anti-cytokine antibody or even the CAR-T cells. We offer a box of different single cytokine detection kit based on the TR-FRET platform.

Besides *in vitro* pharmacodynamics study, we can also provide reagent for *in vitro* study. *In vivo* imaging describes a range of methods for observing and researching biological processes in a complete living animal. It can be used to detect the pharmacodynamics in tumour research.

Sort	Product Name	Cat.No.	Size
Cell Viability Detection Reagent	CellCounting-Lite 2.0 Luminescent Cell Viability Assay	DD1101-01/02/03	10/100/400 ml
	CellCounting-Lite 3D Luminescent Cell Viability Assay	DD1102-01/02/03	
Reporter Gene Assay Reagent	Bio-Lite Luciferase Assay System	DD1201-01/02/03	10/10×10/100 ml
Human Cytokines Quantitative Assay Kit	Add&Read Human IL6 Quantitative Detection Kit(Customized)	DD2703-C-01/02/03	96/500/10,000 tests
	Add&Read Human TNF alpha Quantitative Detection Kit(Customized)	DD2704-C-01/02/03	
	Add&Read Human IL2 Quantitative Detection Kit	DD2705-01/02/03	
	Add&Read Human IFN gamma Quantitative Detection Kit	DD2706-01/02/03	
	Add&Read Human IL8 Quantitative Detection Kit	DD2709-01/02/03	
<i>In vivo</i> imaging Assay	D-Luciferin, Potassium Salt	DD1210-01/02/03	10 mg/100 mg/1 g

## CellCounting-Lite 2.0 Luminescent Cell Viability Assay

### Product Overview

CellCounting-Lite 2.0 Luminescent Cell Viability Assay is a cell viability assay based on the luciferase system. It can detect the endogenous ATP.

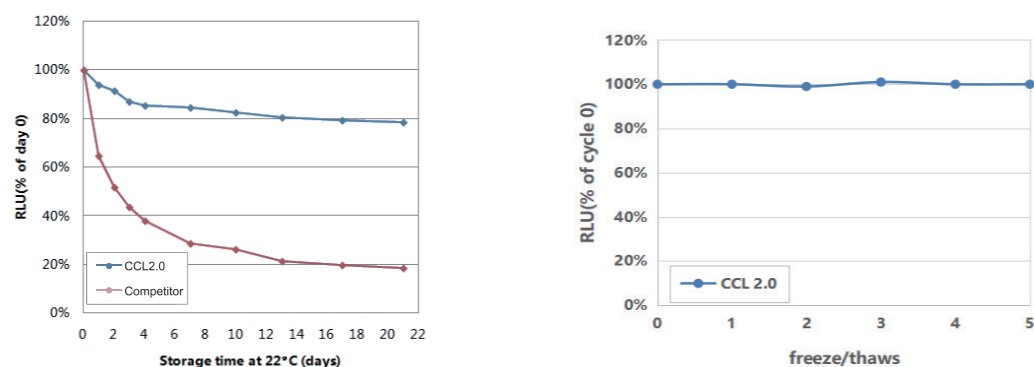
### Product Feature

- **Simple operation:** single component, single step.
- **High stability:** no need for aliquoting and can be stored at room temperature for 7 days.
- **High sensitivity:** can detect as few as 10-15 cells at minimum.

### Data Presentation

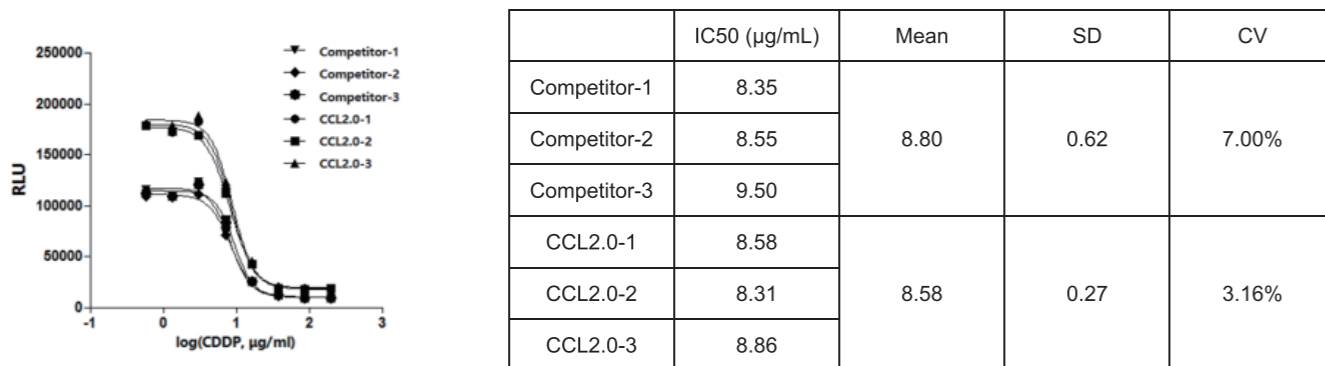
#### Higher storage stability

The special stability formula in CellCounting-Lite 2.0 (CCL2.0) significantly improves the storage stability of the product. In daily use, there is no need for aliquoting and freeze-thawing. It can still remain stable after five freeze-thaw cycles.



#### Cisplatin killing

The IC50 of cisplatin killing HeLa cells was detected by CCL2.0 and Competitor's reagents respectively. As shown below, CCL2.0 has a larger detection window and there is no significant difference in IC50 compared with competitors' similar products, so seamless switching can be realized without worrying about the convergence of results.



## Bio-Lite Luciferase Assay System

### Product Overview

The Bio-Lite Luciferase Assay System is a highly sensitive, stable, and homogeneous firefly luciferase reporter gene assay kit. This kit contains high-purity luciferin and optimized reaction reagents, making the reaction more stable, more tolerant to the environment, and less odorous.

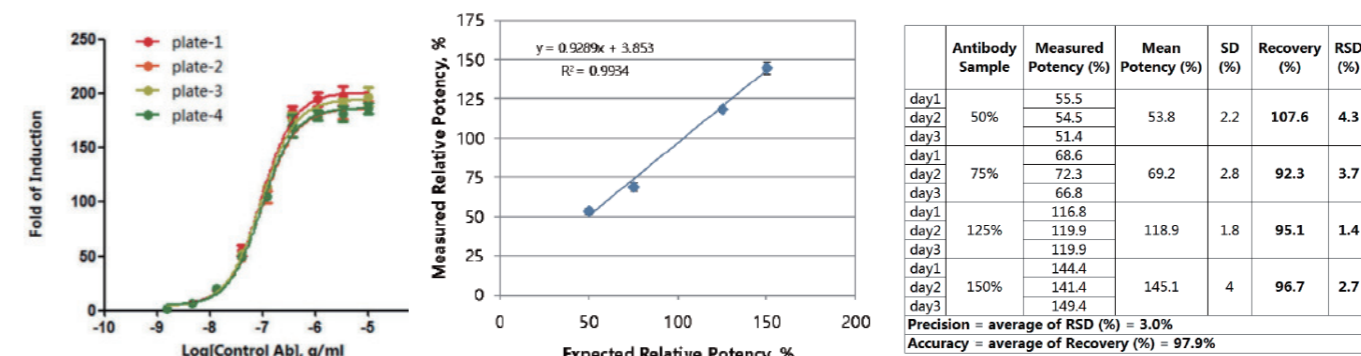
### Product Feature

- **Large detection window:** It has a larger detection window.
- **Stable signal:** The half-life can reach up to 55 minutes.
- **Performance verification:** Pre-verified according to ICH guidelines.

### Data Presentation

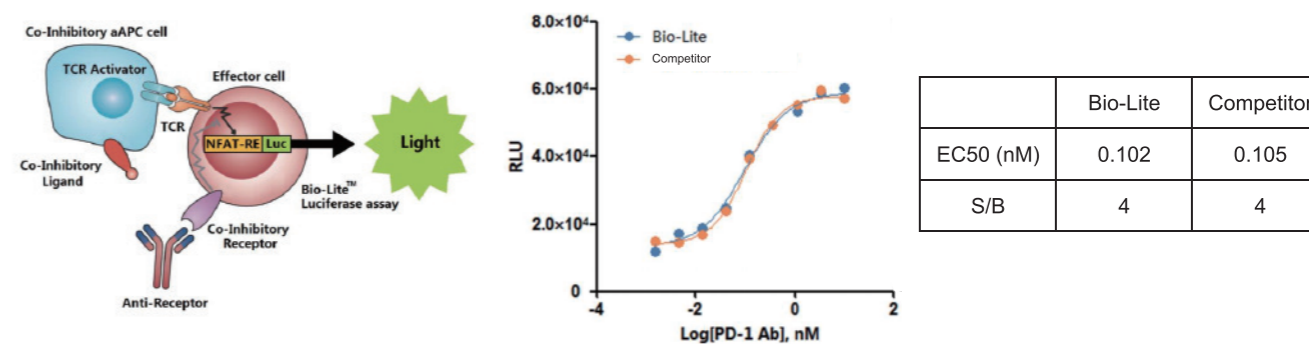
#### The methodology has been pre-validated according to ICH guidelines

According to the ICH guidelines, the repeatability, linearity, precision and accuracy of Bio-Lite were validated by using the trastuzumab ADCC Bioassay model.



#### Immune Checkpoint Modulation Bioassay

PD-1 Jurkat-NFAT-Luc (Effector Cell) was incubated with PD-L1 CHO-K1 (aAPC Cell). The PD-1/PD-L1 Blockade activity of PD-1 Ab was detected by Bio-Lite and competitor respectively.



## Add&Read Human Cytokine Quantification Kit

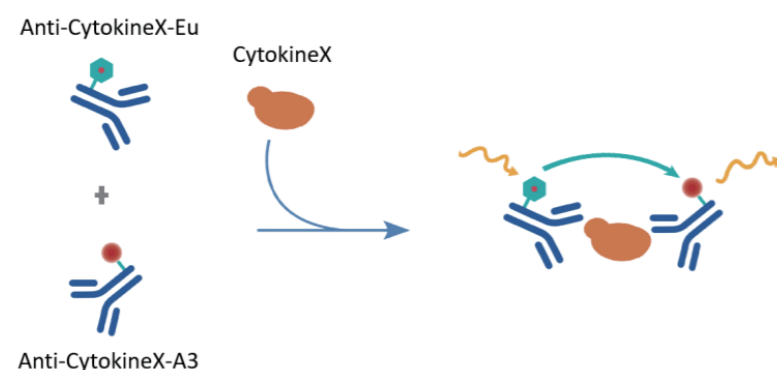
### Product Overview

This product is based on the Add&Read (no-wash ELISA) methodology to detect the content of human cytokines in cell supernatants.

### Product Feature

- **Easy to operate:** just add sample and incubate at room temperature and read plate
- **Save sample:** only 16µL is needed
- **Fast:** saving 80% time compared with ELISA
- **High-throughput:** suitable for automated instruments

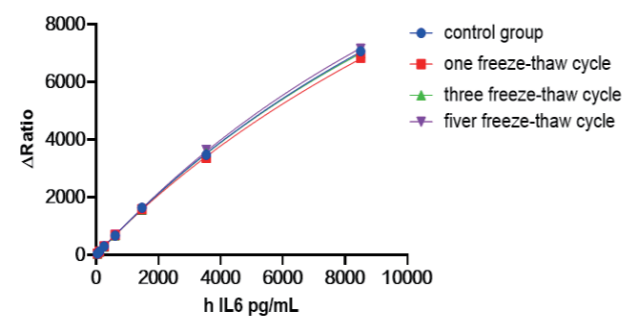
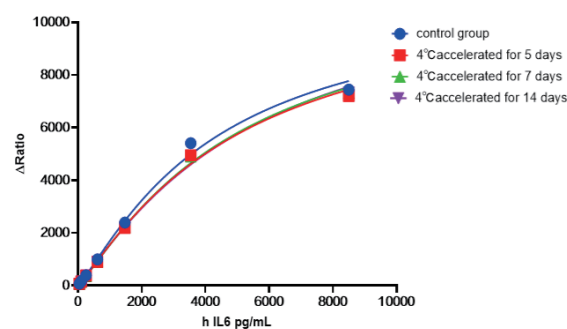
### Detection Principle



### Data Presentation (IL6 for example)

#### Standards Stability

Standards of vazyme DD2703-C was stored at 4°C for 14 days or frozen and thawed for 5 times. The difference in signal of each gradient CV <15%.



### ■ Pharmacokinetics (PK)

Pharmacokinetics (PK) data provide a time course of drug concentrations in circulation, and are important in evaluation of new biotherapeutics in drug development. In the early phases of drug discovery, preclinical PK studies are typically carried out in mice. Their small body size imposes physiological restrictions on blood sampling volume, leading to insufficient amounts of sample available for multiple analytical measurements such as drug, biomarker, or clinical chemistry profiles. In view of this pain point, we can provide Add&Read Human IgG Kit to characterize the drug serum concentration by detection of the Human IgG. Add&Read methodology only need 5~10 µl sample (10 to 20 folds dilution) and suitable for one mice one PK system.

Compared with the one mouse one PK system, the traditional experimental design usually requires 4 mice to cross blood collection in each group, and each dose group needs 6 replicates. However, One mouse one PK system only needs one mouse to collect blood in each group of experiments.(N: number, F: female, M: male)

	Traditional ELISA	One mouse One PK
High Dose Group(N=6 3F 3M)	24 mice	6 mice
Medium Dose Group(N=6 3F 3M)	24 mice	6 mice
Low Dose Group(N=6 3F 3M)	24 mice	6 mice
Blank Matrix & Backup	24 mice	8 mice
Total Animal	96 mice	26 mice

Sort	Product Name	Cat.No.	Size
IgG Quantitative Detection	Add&Read Human IgG Kit	DD2101-01/02	500/10000 tests

## Add&Read Human IgG Kit

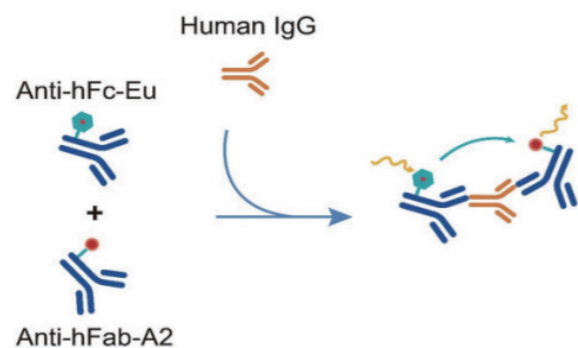
### Product Overview

Add&Read Human IgG Kit can be used to detect the concentration of human IgG in humanized mouse serum (recommend 1:20 dilution).

### Product Feature

- Sandwich method, detection of monoclonal antibodies
- Good subtype compatibility and good consistency with ELISA&HPLC
- High sensitivity and detection range between 0.91~2000 ng/ml

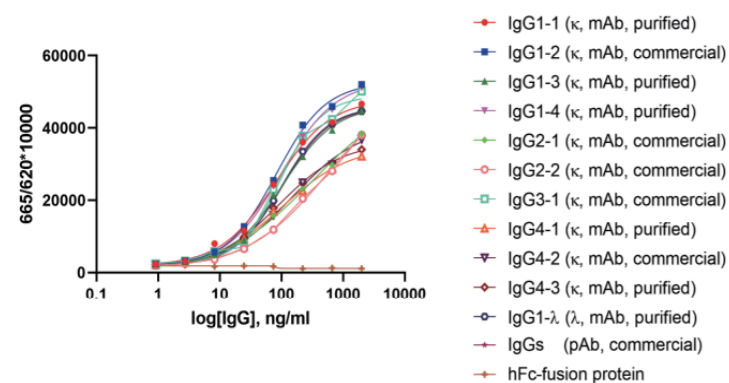
### Detection Principle



### Data Presentation

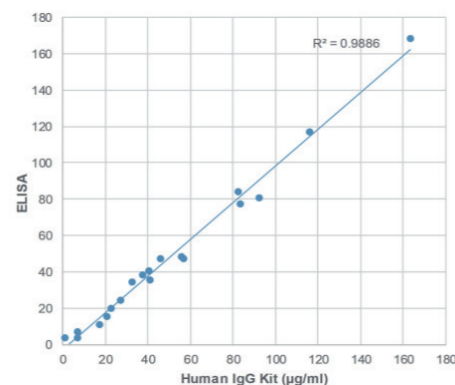
#### Good subtype compatibility

This kit has good consistency in detecting different subtypes and different types of antibodies.



#### Good consistency with ELISA

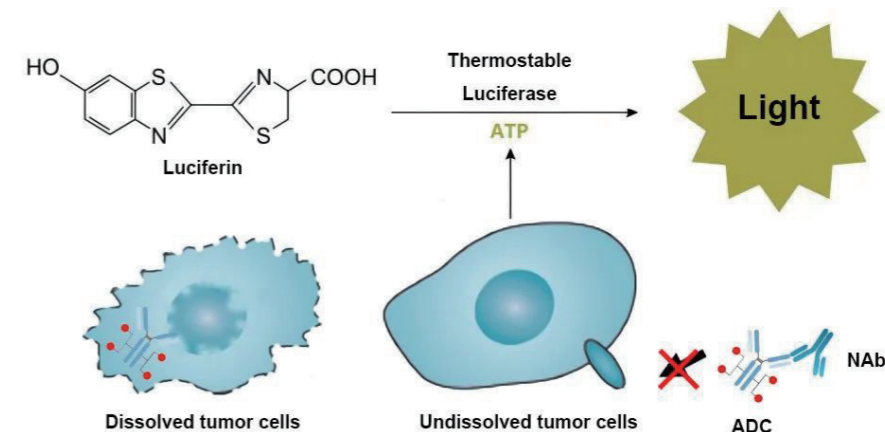
The results of this kit and ELISA were in good consistency.



## Clinical & Commercial

### Immunogenicity Test

There are two primary methods for detecting pre-existing humoral immunogenicity: total binding antibody (TAb) assays and neutralizing antibody (NAb) assays. NAb detection always use cell-base assay. We provide CellCounting-Lite 2.0 Luminescent Cell Viability Assay and Bio-Lite Luciferase Assay System to detect cytotoxicity or reporter gene, add the serum to cell base assay system, the results can characterize the NAb.



Sort	Product Name	Cat.No.	Size
Cell Viability Detection Reagent	CellCounting-Lite 2.0 Luminescent Cell Viability Assay	DD1101-01/02/03	10/100/400 ml
	CellCounting-Lite 3D Luminescent Cell Viability Assay	DD1102-01/02/03	
Reporter Gene Assay Reagent	Bio-Lite Luciferase Assay System	DD1201-01/02/03	10/10×10/100 ml

### ■ Batch Release Test

Just like QC, biological activity testing is also needed in clinical & commercialization. As mentioned above, we can provide the following products for cell-based assay.

Sort	Product Name	Cat.No.	Size
Cell Viability Detection Reagent	CellCounting-Lite 2.0 Luminescent Cell Viability Assay	DD1101-01/02/03	10/100/400 ml
	CellCounting-Lite 3D Luminescent Cell Viability Assay	DD1102-01/02/03	
Reporter Gene Assay Reagent	Bio-Lite Luciferase Assay System	DD1201-01/02/03	10/10×10/100 ml
Human Cytokines Quantitative Assay Kit	Add&Read Human IL6 Quantitative Detection Kit(Customized)	DD2703-C-01/02/03	96/500/10,000 tests
	Add&Read Human TNF alpha Quantitative Detection Kit(Customized)	DD2704-C-01/02/03	
	Add&Read Human IL2 Quantitative Detection Kit	DD2705-01/02/03	
	Add&Read Human IFN gamma Quantitative Detection Kit	DD2706-01/02/03	
	Add&Read Human IL8 Quantitative Detection Kit	DD2709-01/02/03	

### Related Products

Sort	Product Name	Cat.No.	Size
Fast Cloning	ClonExpress II One Step Cloning Kit	C112-01/02	25 /50 rxns (20 µl/rxn)
	ClonExpress MultiS One Step Cloning Kit	C113-01/02	10/25 rxns (20 µl/rxn)
	ClonExpress Ultra One Step Cloning Kit	C115-01/02	25/50 rxns (10 µl/rxn)
	ClonExpress Ultra One Step Cloning Kit V2	C116-01/02	20 /40 rxns (10 µl/rxn)
High-Fidelity PCR	Phanta SE Super-Fidelity DNA Polymerase	P521-d1/d2/d3	100 /500 /1000 U
	2 × Phanta Flash Master Mix	P510-01/02/03	1 ml/5 × 1 ml/15 × 1 ml
	2 × Phanta Flash Master Mix (Dye Plus)	P520-01/02/03	1 ml/5 × 1 ml/15 × 1 ml

## Solution for Small Molecule Drug

Whether in target-based small molecule drug discovery (TDD) or phenotype-based small molecule drug discovery (PDD), high-throughput screening cell based assay is necessary.

Small Molecule Drug HTS solution		
Hit Discovery	Hit to Lead	PD Research
Cell Viability Detection Reagent GPCR assay		
DD11/DD28		

### ■ Discovery & Development

#### ■ High-Throughput Screening

At present, there are two main directions for the discovery of small molecular drugs, one is the screening of anti-tumor drugs, such as target kinase or protein degradation (PROTAC), the other field is the screening of drugs such as metabolism and cardiovascular diseases, GPCR-target drug is more related to these fields. We provide cytotoxicity assay and GPCR assay for small molecular drug HTS.

Sort	Product Name	Cat.No.	Size
Cell Viability Detection Reagent	CellCounting-Lite 2.0 Luminescent Cell Viability Assay	DD1101-01/02/03	10/100/400 ml
	CellCounting-Lite 3D Luminescent Cell Viability Assay	DD1102-01/02/03	
GPCR assay	Add&Read cAMP Detection Kit	DD2801-01/02/03	1,000/5,000/20,000 tests

## CellCounting-Lite 3D Luminescent Cell Viability Assay

### Product Overview

CellCounting-Lite 3D Luminescent Cell Viability Assay is a cell viability assay based on the luciferase system. Compared to CellCounting-Lite 2.0, it has stronger lysis ability, which can be used in 3D cell culture and organoid.

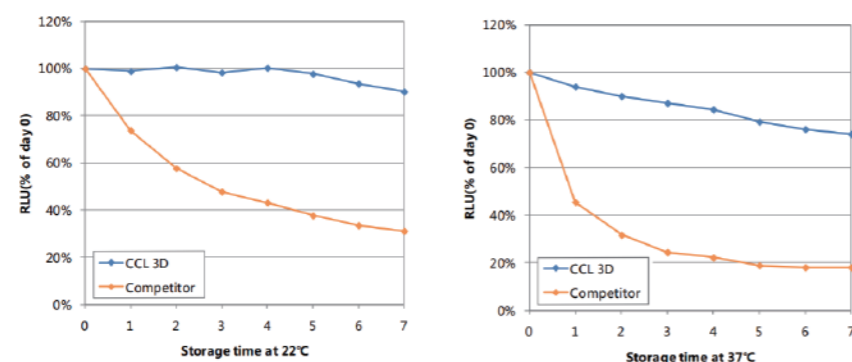
### Product Feature

- **Simple operation and stronger lysis ability:** single component, single step, stronger lysis ability.
- **High stability:** no need for aliquoting and can be stored at room temperature for 7 days.
- **High-throughput:** suitable for automated instruments and compatible with HTS.

### Data Presentation

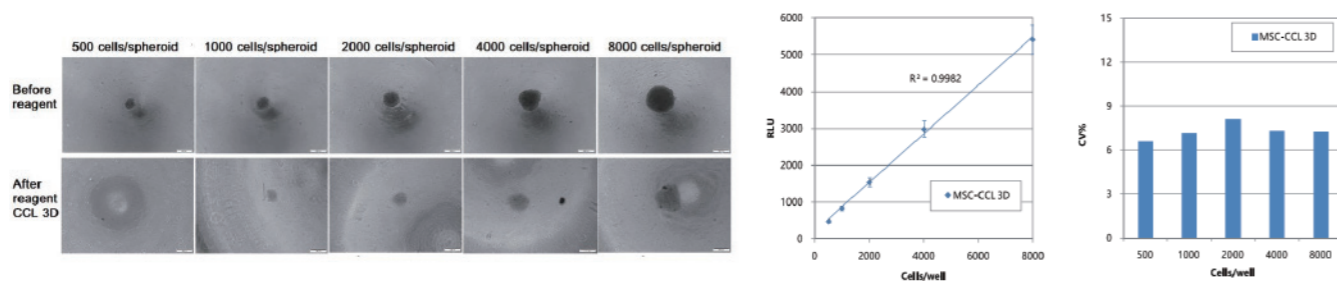
#### Higher storage stability

The luminescence were detected by CCL 3D and competitor at different time at 22°C and 37°C. It shows that CCL 3D could maintain more than 90% activity at RT for 7 days, and CCL 3D could still maintain more than 80% activity at 37°C for 5 days.



#### Human adipocyte stem cell killing assay

The MSC cells with different densities were cultured overnight. The picture shows linear and CV of CCL 3D. It can be seen that this product can fully lyse MSC cell spheres, and thus ensure the accuracy of the results (CV<10%).



## Add&Read cAMP Detection Kit

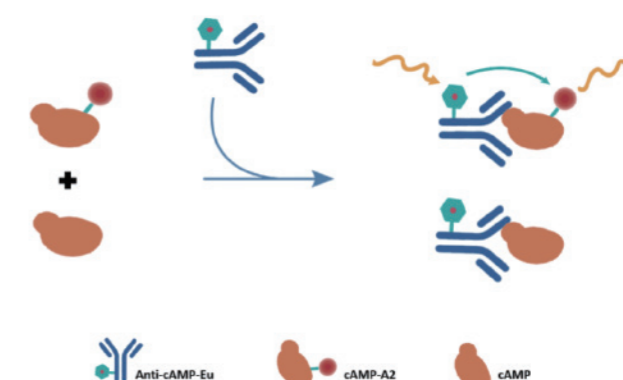
### Product Overview

In GPCR-Targeted drug screening, cAMP (Cyclic Adenosine Monophosphate) is the secondary messenger molecule of Gs and Gi pathways. By detecting the content of cAMP in cells, GPCR-Targeted drugs with downstream effects can be screened.

### Product Feature

- **Considering both window and sensitivity**
- **Multiple applications, can be used for Gs or Gi pathway**
- **Time-saving and simplified operation**
- **High-Throughput Screening for GPCR target drugs**

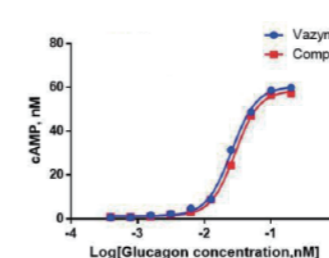
### Detection Principle



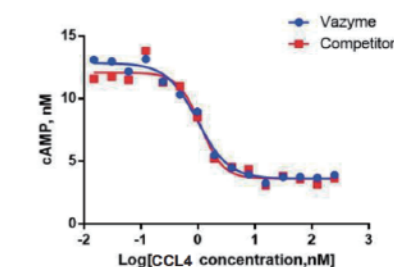
### Data Presentation

#### Validation in Different Applications

On GCGR (Gs) cell system, and the receptor was activated by Glucagon to produce cAMP, and the cell samples were detected by this kit and the competitor's. On CCR5 (Gi) cell system, Forskolin was used to stimulate the cells to produce cAMP, and then CCL4 was added to activate the receptor to reduce the production of cAMP. Samples were detected by this kit and the competitor's. Results all shows the window is equivalent to the Competitor's.



Brand	Vazyme	Competitor
EC50(nM)	0.57	0.59
S/B	43	47



Brand	Vazyme	Competitor
EC50(nM)	0.99	1.12
S/B	4	3

## Related Products

Sort	Product Name	Cat.No.	Size
RNA Extraction	VeZol Reagent	R411-01/02	100 /200 ml
	FreeZol Reagent	R711-01/02	200 /400 rxns
	FastPure Cell/Tissue Total RNA Isolation Kit V2	RC112-01	50 rxns
	FastPure Blood/Cell/Tissue/Bacteria DNA Isolation Mini Kit	DC112-01/02	50/200 rxns
RT-qPCR	AccurSTART U+ One Step RT-qPCR Super PreMix (ONE TUBE)	Q621-01/02/03	200 /1,000/10,000 rxns
	FlysisAmp Cells Lysis Kit	CL101-01/02	(20 µl/rxn)
	FlysisAmp Cells-to-cDNA Kit	CL111-01/02	100 rxns/500 rxns(50 µl/rxn)
	FlysisAmp Cells-to-CT 2-Step Probe Kit	CL121-01/02	100 /500 rxns(50 µl/rxn)
	FlysisAmp Cells-to-CT 2-Step SYBR Green Kit	CL122-01/02	100 /500 rxns(50 µl/rxn)
	FlysisAmp Cells-to-CT 1-Step Probe Kit	CL131-01/02	100 /500 rxns(50 µl/rxn)
	FlysisAmp Cells-to-CT 1-Step SYBR Green Kit	CL132-01/02	100 /500 rxns(50 µl/rxn)
	AccurSTART U+ One Step RT-qPCR Super PreMix ONE UBE)	Q621-01/02/03	100 /500 rxns(50 µl/rxn)
	FlysisAmp Cells Lysis Kit	CL101-01/02	100 rxns/500 rxns(50 µl/rxn)
	FlysisAmp Cells-to-cDNA Kit	CL111-01/02	100 rxns/500 rxns(50 µl/rxn)
	FlysisAmp Cells-to-CT 2-Step Probe Kit	CL121-01/02	100 rxns/500 rxns(50 µl/rxn)
	FlysisAmp Cells-to-CT 2-Step SYBR Green Kit	CL122-01/02	100 rxns/500 rxns(50 µl/rxn)
	FlysisAmp Cells-to-CT 1-Step Probe Kit	CL131-01/02	100 rxns/500 rxns(50 µl/rxn)
	FlysisAmp Cells-to-CT 1-Step SYBR Green Kit	CL132-01/02	100 rxns/500 rxns(50 µl/rxn)



## Vazyme Online

For more information about Vazyme products and services, please visit our website [www.vazyme.com](http://www.vazyme.com)

### Published by Vazyme (688105.SH)

#### For Biotech Business:

☎ +86 25-83772625

✉ [info.biotech@vazyme.com](mailto:info.biotech@vazyme.com)

🌐 [www.vazymeglobal.com](http://www.vazymeglobal.com)

📍 Red Maple Hi-tech Industry Park, Nanjing, PRC

👉 Follow Us



\*All rights reserved.

