

## Bio-Lite Luciferase Assay System

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10/10×10/100 ml

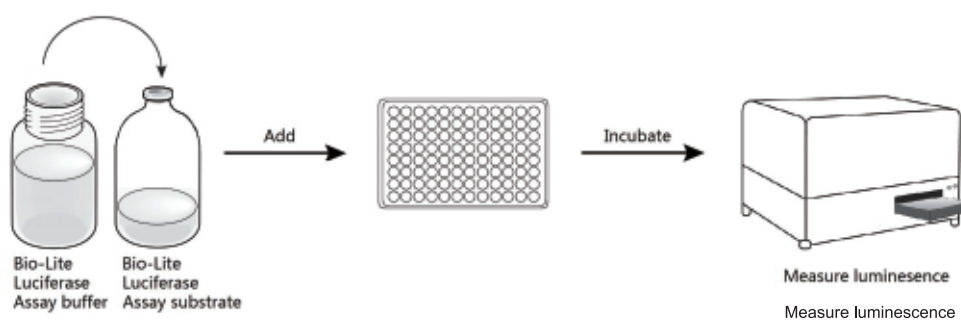
DD1201-01/02/03

### Luciferase Reporter Gene Detection Reagent

Bio-Lite Luciferase Assay system is a firefly luciferase reporter gene assay kit with high sensitivity, stability and homogeneity. The kit can be used to detect various bioactivities in the functional screening and development of biomacromolecule candidate drugs, such as Fc effect detection, T cell activation detection, immune checkpoint detection, and cytokine and growth actor detection.

### Operation Process

Just add this reagent to the cells without removing medium and we can detect the luminescence after incubating 3 minutes.



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**Use Case**

**▼ 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's respectively. The detection principle and results were shown in Fig. 1A and 1B, respectively

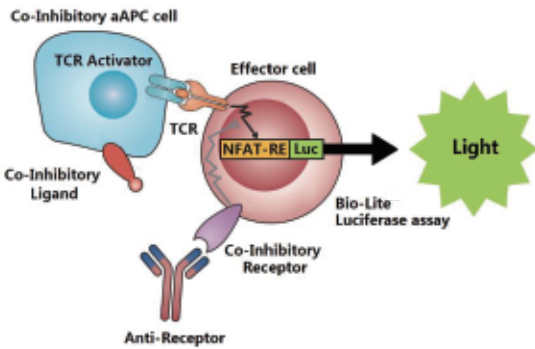


Figure 1A

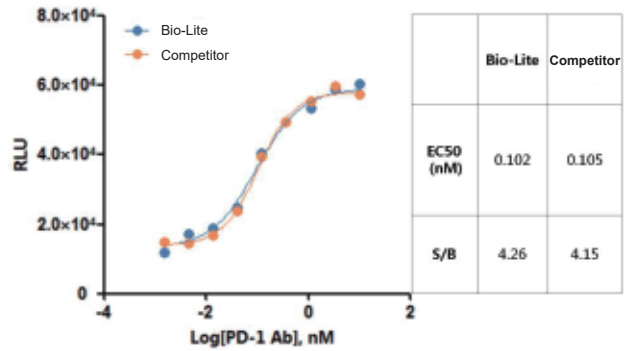


Figure 1B

**▼ Fc Effector Activity Bioassay**

FcyRIII Jurkat-NFAT-Luc (Effector Cell) was incubated with SK-BR-3 (Target Cell). The ADCC activity of Trastuzumab was detected by Bio-Lite and competitor's respectively. The detection principle and results were shown in Fig.2A and 2B, respectively.

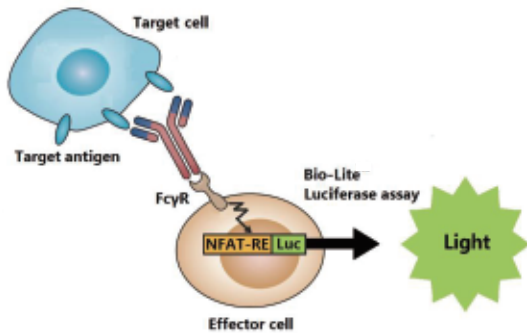


Figure 2A

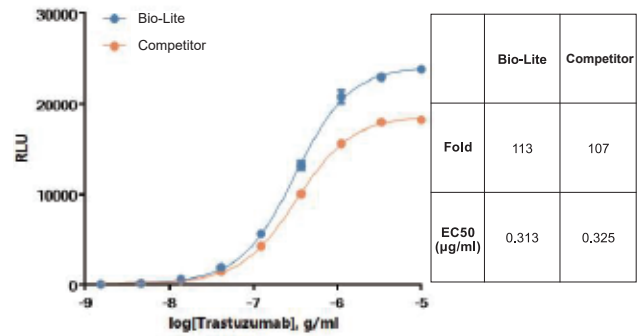


Figure 2B

**Repeatability, Linearity, Precision and Accuracy**

The repeatability (Fig.3A), linearity (Fig.3B), precision and accuracy (Table 3) of Bio-Lite in bioactivity detection were verified by using the Trastuzumab ADCC Bioassay model according to the ICH guideline.

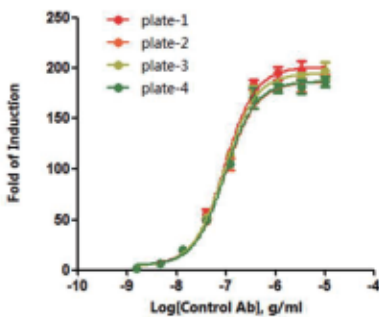


Figure 3A

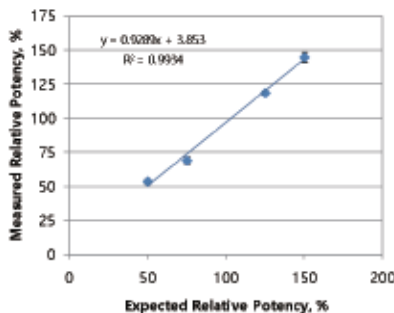


Figure 3B

	Antibody Sample	Measured Potency (%)	Mean Potency (%)	SD (%)	Recovery (%)	RSD (%)
50%	day1	55.5	53.8	2.2	107.6	4.3
	day2	54.5				
	day3	51.4				
75%	day1	68.6	69.2	2.8	92.3	3.7
	day2	72.3				
	day3	66.8				
125%	day1	116.8	118.9	1.8	95.1	1.4
	day2	119.9				
	day3	119.9				
150%	day1	144.4	145.1	4	96.7	2.7
	day2	141.4				
	day3	149.4				

Precision = average of RSD (%) = 3.0%  
Accuracy = average of Recovery (%) = 97.9%

Table 3