



cAMP Hunter[®] Semaglutide Bioassay

Qualified with Ozempic[®]

95-0062Y2-00175 (2-Plate Kit)

95-0062Y2-00176 (10-Plate Kit)

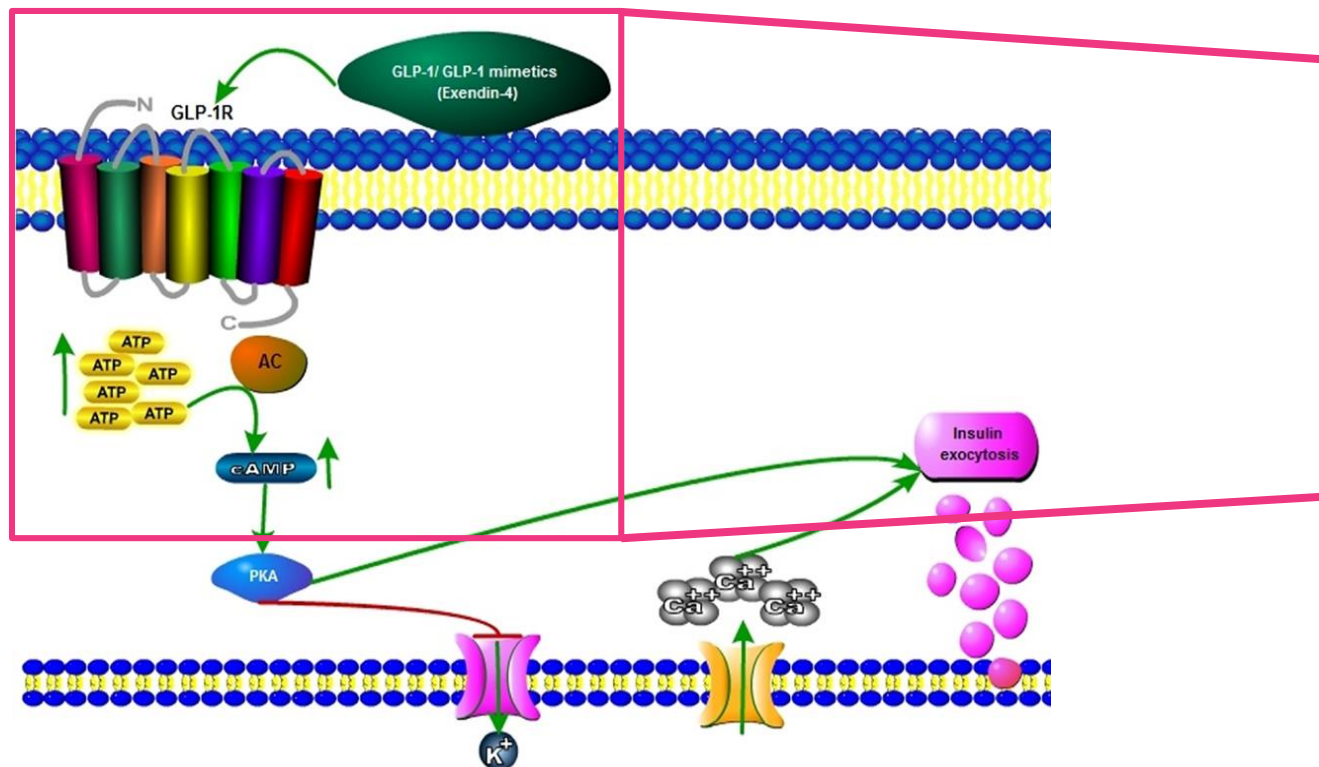
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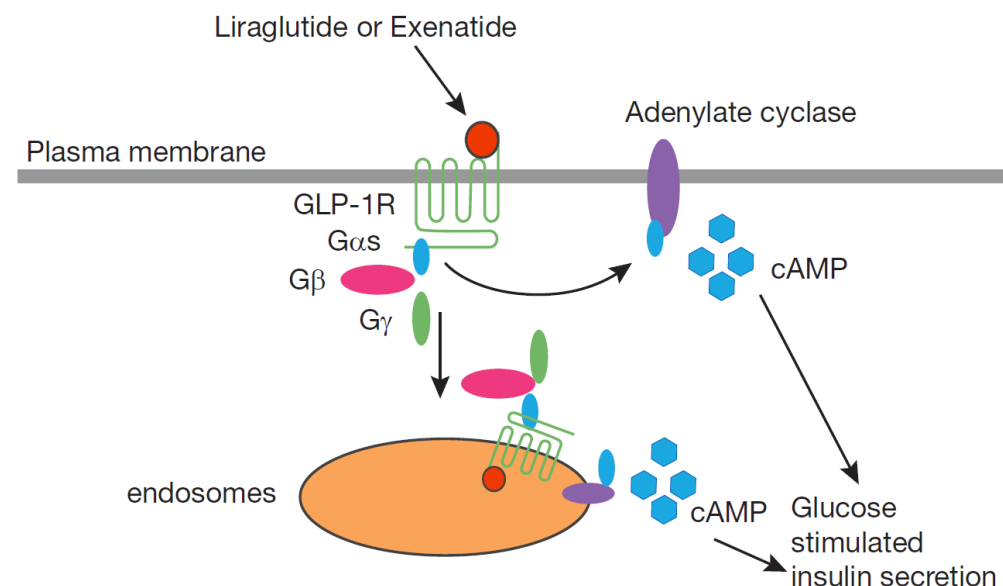
Semaglutide (Ozempic®)

For Treatment of Type II Diabetes mellitus

Mechanism of Action



Assay Principle



Source: Sebastião et. al., Front. Endocrinol. (2014); 5, 110

cAMP Hunter® Semaglutide Bioassay Kit

Kit Components

Materials Provided

List of Components	95-0062Y2-00175	95-0062Y2-00176
cAMP Hunter CHO-K1 GLP1R Bioassay Cells (3.75 x 10 ⁶ cells in 0.2 mL per vial)	2	10
AssayComplete™ Cell Plating 2 Reagent (100 mL per bottle)	1	2
AssayComplete Cell Assay Buffer (50 mL per bottle)	1	2
AssayComplete Protein Dilution Buffer B2 (50 mL per bottle)	1	2
Control Agonist (Human Exendin-4)	1 x 500 µg	1 x 500 µg
cAMP Detection Kit for Bioassays		
cAMP Standard (250 µM) (Bottle)	1 x 0.2 mL	1 x 1 mL
cAMP Antibody Reagent (Bottle)	1 x 5 mL	1 x 25 mL
cAMP Lysis Buffer (Bottle)	1 x 7.6 mL	1 x 38 mL
Substrate Reagent 1 (Bottle)	1 x 2 mL	1 x 10 mL
Substrate Reagent 2 (Bottle)	1 x 0.4 mL	1 x 2 mL
cAMP Solution D (Bottle)	1 x 10 mL	1 x 50 mL
cAMP Solution A (Bottle)	1 x 16 mL	1 x 80 mL
96-Well White, Clear-Bottom, TC-Treated, Sterile Plates with Lid	2	10

Sample data

Semaglutide Bioassay Qualification

Bioassay Workflow

Simple, Homogenous and Rapid Protocol

Plate Read-to-Use Cells

Treat with Agonist/ Molecule

Read Luminescence



Optimized Semaglutide Dose Curve and Plate Layout For Assay Qualification

Dilution Scheme

Concentration, ng/mL	Diln Factor
3	
1	3
0.33	3
0.11	3
0.056	2
0.037	1.5
0.025	1.5
0.012	2
0.0062	2
0.0031	3
0.00078	4

Representative Dose Curve (100%)

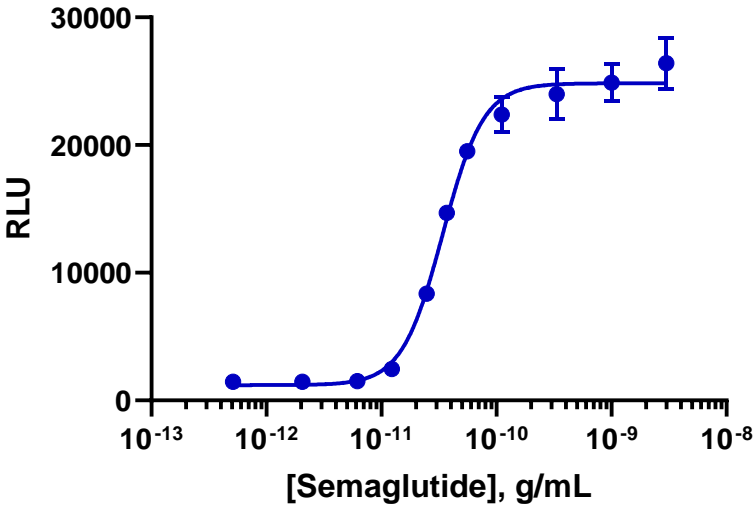
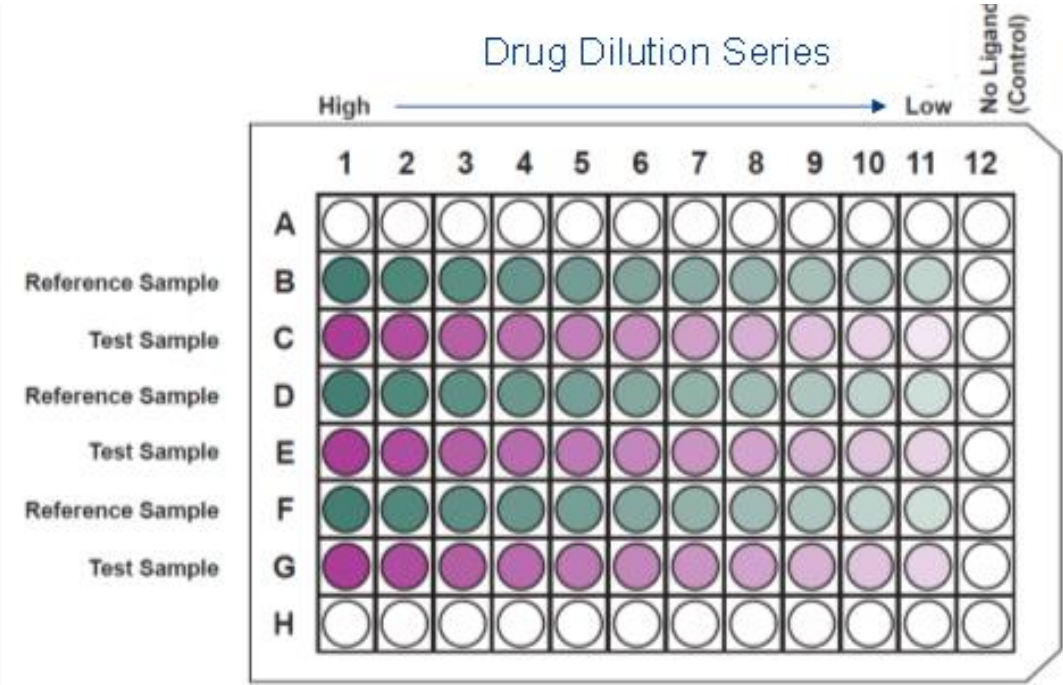
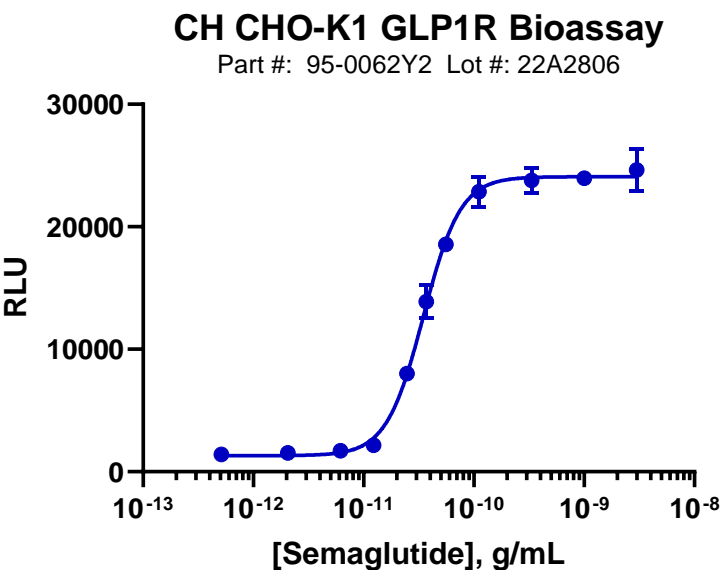


Plate Layout

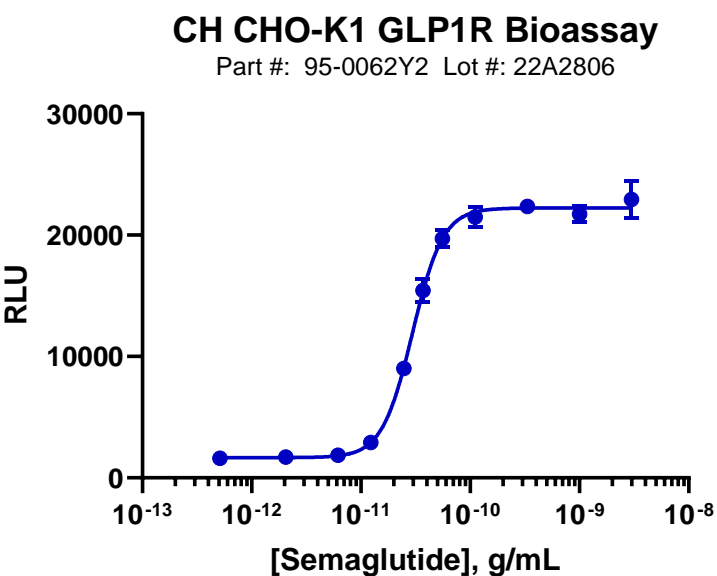


Day-to-Day Repeatability with Semaglutide (Single Analyst)

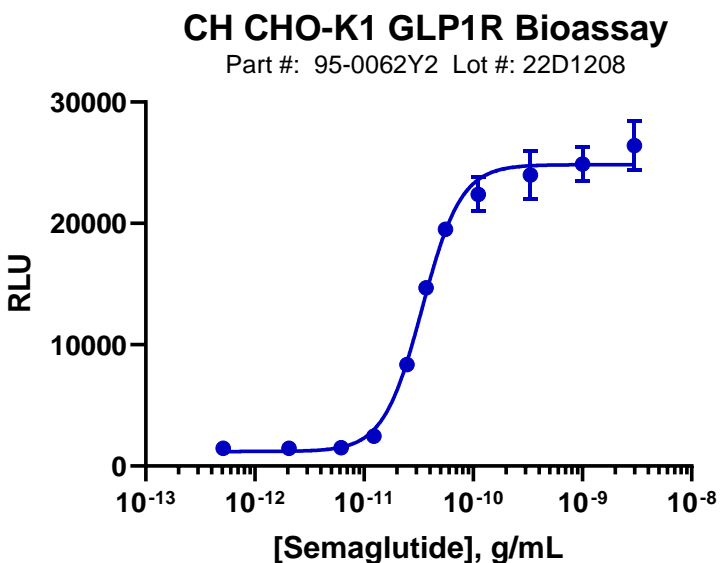
Day 1



Day 2



Day 3



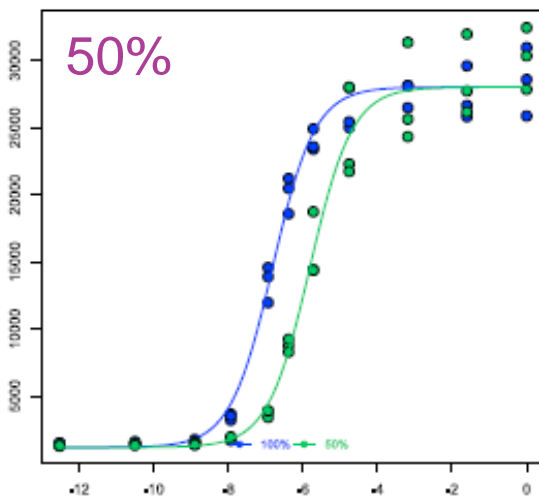
	Day 1	Day 2	Day 3	% RSD
S/B	15.8	13.9	16.3	8.3%
EC ₅₀ , pg/mL	34.8	29.7	34.1	8.4%

Note: consistent data generated with two different bioassay lots

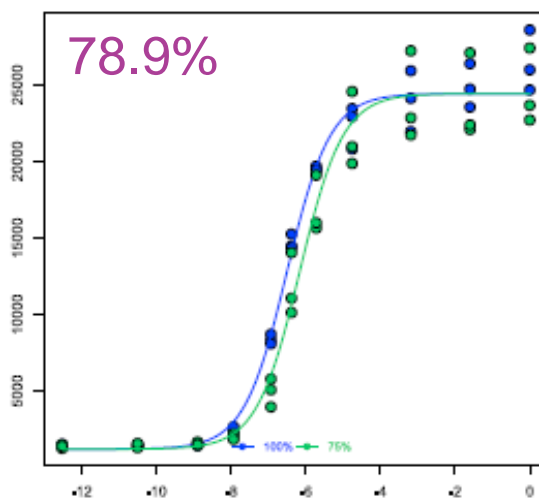
Representative Relative Potency Data (4 Nominal Concentrations) (Analyst 1 vs Analyst 2)

Analyst 1

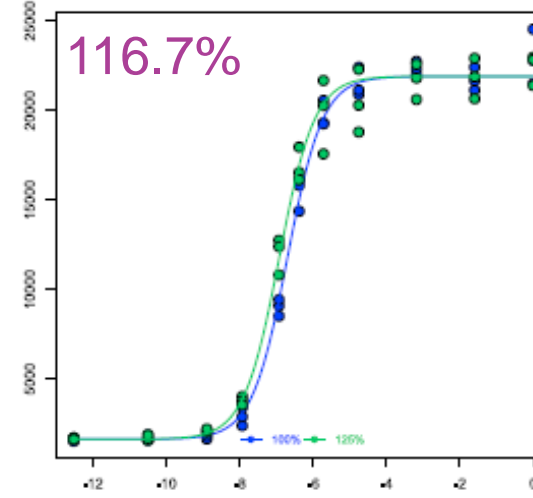
50%



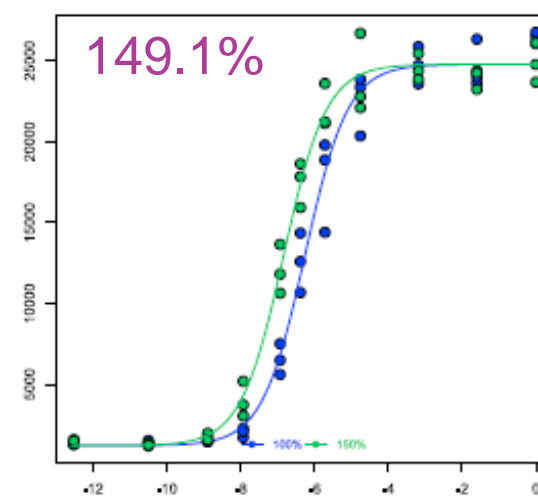
75%



125%

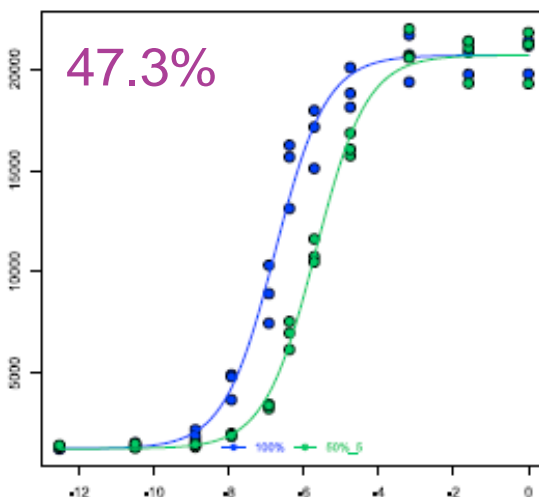


150%

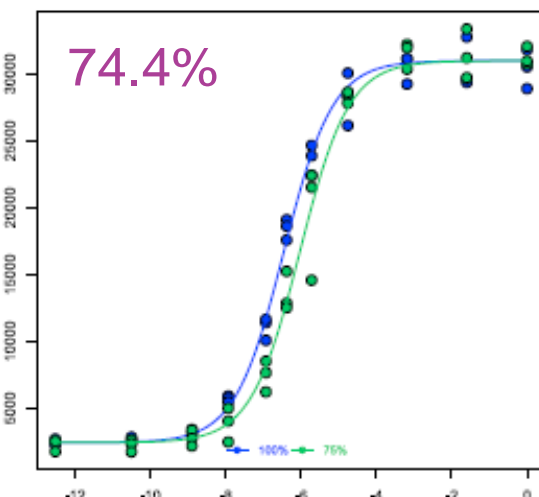


Analyst 2

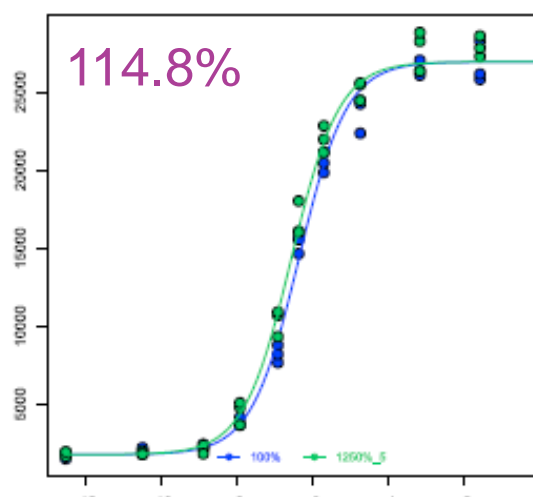
47.3%



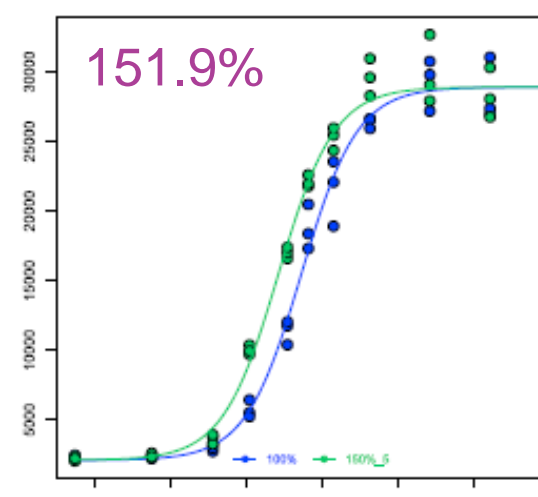
74.4%



114.8%

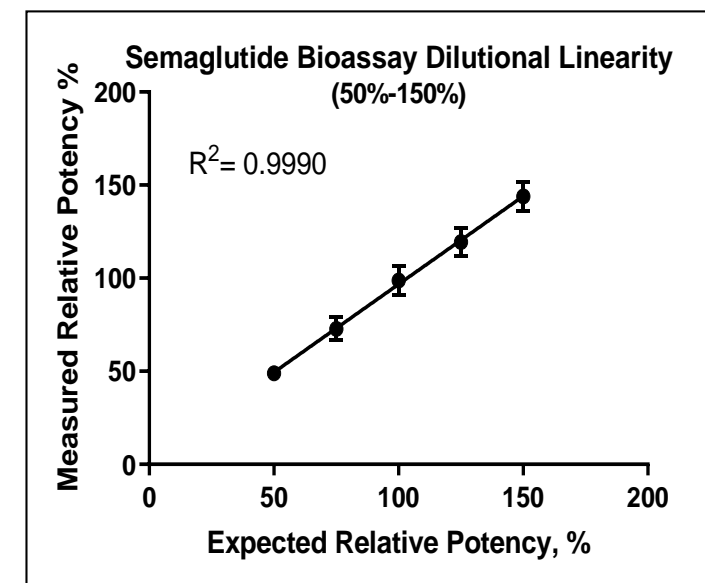


151.9%



Semaglutide Bioassay Qualification Data

Nominal RP, %	Analyst	Observed RP, %	Average RP, %	% RSD	Average % Recovery
150	1	149.1	143.9	5.4	95.9%
	1	138.8			
	1	135.8			
	2	151.9			
125	1	130.7	119.4	6.4	95.5%
	1	116.7			
	1	115.2			
	2	114.8			
100	1	108	98.8	7.8	98.8%
	1	101.1			
	1	88.1			
	1	94.4			
	2	102.3			
75	1	73.5	72.8	8.5	97.1%
	1	79.0			
	1	64.3			
	2	74.4			
50	1	47.3	48.9	3.9	97.9%
	1	51.1			
	1	50			
	2	47.3			



Parameter	Value	Specification
Accuracy (Average % Recovery)	97%	100% +/- 20%
Repeatability	8.7%	≤20%
Intermediate Precision	≤8.5%	≤20%
Linearity (R^2)	0.9990	≥0.95

Excellent accuracy, repeatability, intermediate precision, and dilutional linearity

Benefits for “Ready-to-Use” Bioassay Kits

Functional response based on drug MOA

Verified and Qualified with innovator’s marketed drug

Simple protocol; Rapid results

Specific and Sensitive assay

Highly reproducible

Readily Implement with Optimized kit

- Frozen ready-to-assay cells
- Bioassay Detection Reagents
- Cell Plating Reagent
- Dilution Buffer
- Control Agonist
- Tissue Culture-Treated Plates

For More Info, Questions or Technical Support



Web:

[Cell-Based Bioassays for Biologics](#)

Technical Support

DRX_SupportUS@eurofinsUS.com