

VALIDATION DATA



Cyclic CMP ELISA Kit Item No. 502480

Cayman's Cyclic CMP ELISA Kit was validated to assess its performance for the quantitative measurement of cyclic CMP in bacterial lysates, the biological matrix most commonly used in research studies. The validation experiments were designed to evaluate assay sensitivity, working range, matrix compatibility, accuracy, and precision under the conditions described in the kit booklet.

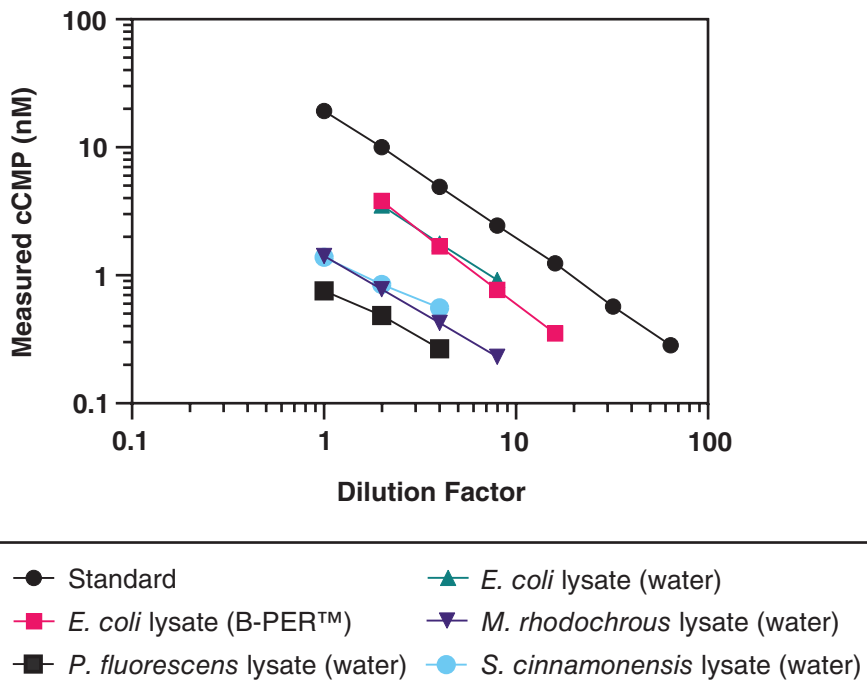
The data presented in this document describes the performance characteristics of the Cyclic CMP ELISA and is intended to assist users in experimental planning, sample dilution selection, and interpretation of results.

Assay Range and Sensitivity

Assay Data Points	
Assay Range	0.156-20 nM
Lower Limit of Detection (LLOD)	0.1 nM
Sensitivity (defined as %B/B ₀)	0.39 nM

Parallelism

To assess parallelism, bacterial lysates were processed as described in the Sample Preparation section of the Cyclic CMP (cCMP) ELISA Kit booklet, serially diluted with Assay Buffer, and evaluated using the cCMP ELISA Kit. Measured concentrations were plotted as a function of the sample dilution. The results are shown below.



WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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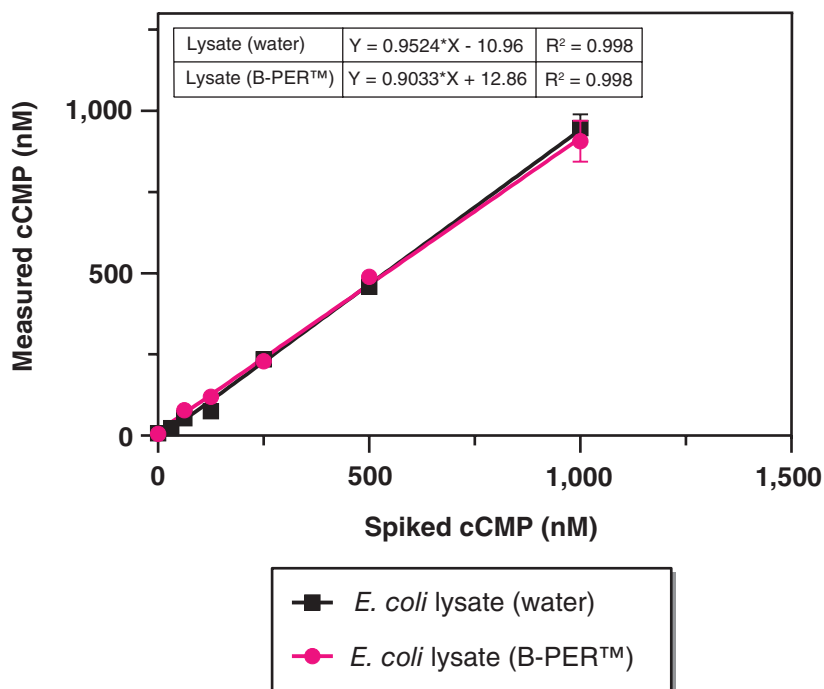
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Spike and Recovery

E. coli lysates were spiked with cCMP, processed as described in the Sample Preparation section of the cCMP ELISA Kit booklet, serially diluted with Assay Buffer, and evaluated using the cCMP ELISA Kit. The results are shown below. The error bars represent standard deviations obtained from multiple dilutions of each sample.



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Linearity

E. coli lysates were spiked with cCMP, processed as described in the Sample Preparation section of the cCMP ELISA Kit booklet, serially diluted with Assay Buffer, and evaluated for linearity using the cCMP ELISA Kit. The results are shown below.

Dilution Factor	Measured Concentration (nM)	Linearity%
<i>E. coli</i> lysate in water spiked with 1 μ M cCMP		
200	912	100
400	932	102
800	934	102
1,600	1,009	111
<i>E. coli</i> lysate in B-PER™ spiked with 1 μ M cCMP		
400	860	100
800	864	101
1,600	997	116

NOTE: Linearity has been calculated using the following formula:

$\% \text{Linearity} = (\text{Observed concentration value, dilution adjusted} / \text{First observed concentration value in the dilution series, dilution adjusted}) * 100$

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Precision

Intra-assay precision was determined by analyzing 24 replicates of three matrix controls (*E. coli* lysates) in a single assay.

Matrix Control	Measured cCMP (nM)	%CV
Control 1	1,027	3.2
Control 2	276	9.1
Control 3	4.54	7.7

Inter-assay precision was determined by analyzing replicates of three matrix controls (*E. coli* lysates) in nine separate assays on different days.

Matrix Control	Measured cCMP (nM)	%CV
Control 1	869	9.9
Control 2	187	8.9
Control 3	4.72	9.3

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