

# CatchPoint cGMP Fluorescent Assay Kit

Ultimate sensitivity in an HTS format

## KEY FEATURES

- Sensitive detection limit
- Robust format
- Rapid signal development
- No termination step
- Flexible read time
- HTS-compatible

The CatchPoint® Cyclic-GMP Assay Kit measures cGMP levels and adenylate cyclase activity via a competitive immunoassay format. The assay's high affinity reagents are optimized for sensitivity and precision in applications where cGMP levels are low. In an HTS setting, the assay minimizes the handling steps and timing constraints of traditional immunoassays. For efficiency and economy, the kit can be purchased in bulk for high-throughput screening. The assay is ideally suited for cell-based assays.

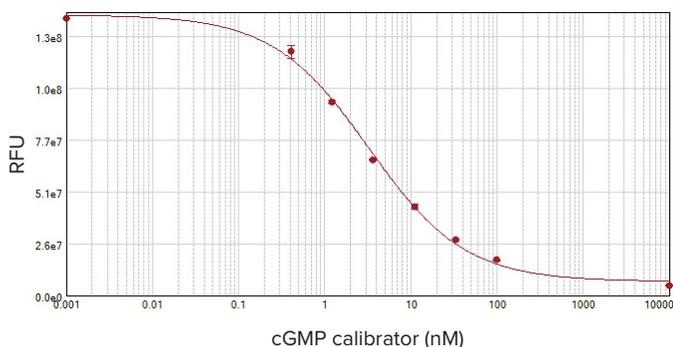
### Sensitive and precise

Many high throughput assays fail to produce viable data when cGMP levels are low. Screening agonists/antagonists of G<sub>i</sub>-coupled GPCRs can be particularly problematic. The single wash step of the CatchPoint cGMP Assay Kit significantly helps increase resolution and improve data quality in these situations. In contrast to homogeneous formats, the assay is very

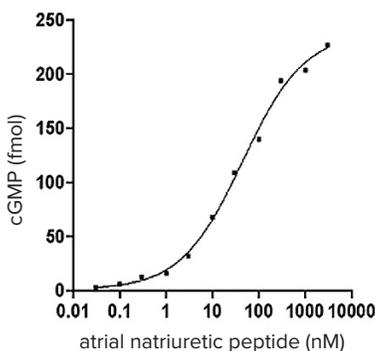
resistant to interference from colored or fluorescent compounds. The compounds are washed away prior to the development step and, due to the fluorescent signal's intensity, small traces of residual fluorescence or signal quenching are insignificant. The CatchPoint cGMP Assay Kit has a detection limit of 0.1 nM cGMP (6 fmol/well) and a maximum measurable concentration of 80 nM (4800 fmol/well). It also has a midpoint value of 3.4 nM (204 fmol).

### Convenient protocol

With only a single wash step, the CatchPoint cGMP Assay Kit is easy to use. There are no multiple wash steps and no radioactive components as required by other sensitive assay procedures. The protocol is straightforward and user-friendly. The assay is read by fluorescence intensity measurement. Data from the SpectraMax® i3 Multi-Mode Microplate Reader are shown.



**Figure 1. cGMP calibration curve.** The calibration curve for the CatchPoint cGMP Assay Kit was generated on the SpectraMax i3 Multi-Mode Microplate Reader. Data were taken two hours after addition of Stoplight Red substrate. The  $EC_{50}$  of the cGMP calibration curve was 3.3 nM.



**Figure 2. Atrial natriuretic peptide dose-response curve.** Atrial natriuretic peptide dose response in RFL-6 cells, 96-well assay format. A confluent monolayer of RFL-6 cells in a 12-well plate was pre-incubated for 10 minutes in Krebs Ringer bicarbonate buffer containing the non-selective phosphodiesterase inhibitor IBMX. Cells were subsequently stimulated with ANP for 15 minutes, lysed, and analyzed using the CatchPoint cGMP Fluorescent Assay Kit.

## Flexible read time

The CatchPoint cGMP Assay Kit uses the proprietary Stoplight Red substrate to generate a stable and precise fluorescent readout without requiring exact timing in its incubation stages. Using Stoplight Red, no termination step is needed to halt the assay, so the assay can be read in as little as 10 minutes or up to 24 hours after substrate addition. This makes the assay particularly suitable for robotic or workstation procedures that are prone to variations in timing.

## Robust assay performance

The CatchPoint cGMP fluorescent assay is more robust and less susceptible to interferences than other assays. Where other assays lack the ability to detect exceptionally low levels of cGMP, the CatchPoint cGMP Assay Kit can produce useful and reliable data. Plotting a standard calibration curve shows minimum detectable concentrations of cGMP levels at 3.3 nM (Figure 1), while Figure 2 shows a strong dose response to stimulation in RFL-6 cells.

### Ordering information

Item	Description	Part number
CatchPoint cGMP 384-well Fluorescent Assay Kit (Explorer)	ELISA-based assay for the detection and quantification of cGMP * Contains microplates, reagents, and buffers for (2) 384-well microplates	R8065
CatchPoint cGMP 384-well Fluorescent Assay Kit (Bulk)	ELISA-based assay for the detection and quantification of cGMP * Contains microplates, reagents, and buffers for (10) 384-well microplates	R8066
CatchPoint cGMP 96-well Fluorescent Assay Kit (Explorer)	ELISA-based assay for the detection and quantification of cGMP * Contains microplates, reagents, and buffers for (2) 96-well microplates	R8074
CatchPoint cGMP 96-well Fluorescent Assay Kit (Bulk)	ELISA-based assay for the detection and quantification of cGMP * Contains microplates, reagents, and buffers for (10) 96-well microplates	R8075

## Compatible with these Molecular Devices systems



SpectraMax® i3/i3x  
Multi-Mode Microplate Reader



SpectraMax® Paradigm®  
Multi-Mode Microplate Reader



FlexStation® 3 Multi-Mode  
Microplate Reader



SpectraMax® M Series  
Multi-Mode Microplate Readers



Gemini™ EM/XPS  
Microplate Reader

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