

CatchPoint cAMP 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-AMP Assay Kit measures cAMP 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 cAMP 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 cAMP levels are low. Screening agonists/antagonists of G_i-coupled GPCRs can be particularly problematic. The single wash step of the CatchPoint cAMP 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 cAMP Assay Kit has a detection limit of 0.1 nM cAMP (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 cAMP 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 and SpectraMax® M5 Multi-Mode Microplate Readers are shown.

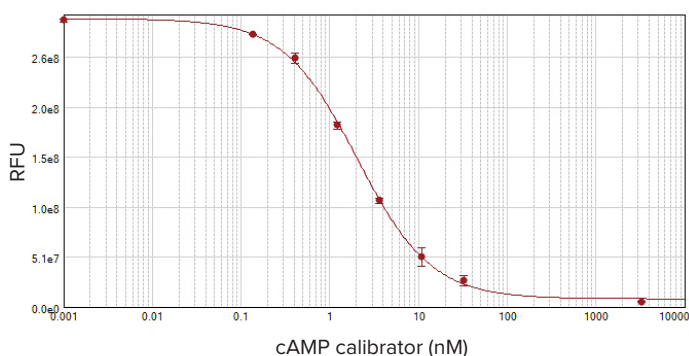


Figure 1. cAMP calibration curve. The calibration curve for the CatchPoint cAMP Assay Kit was generated on a SpectraMax i3 Multi-Mode Microplate Reader. Data were taken two hours after addition of Stoplight Red substrate. The EC_{50} of the cAMP calibration curve was 2.0 nM.

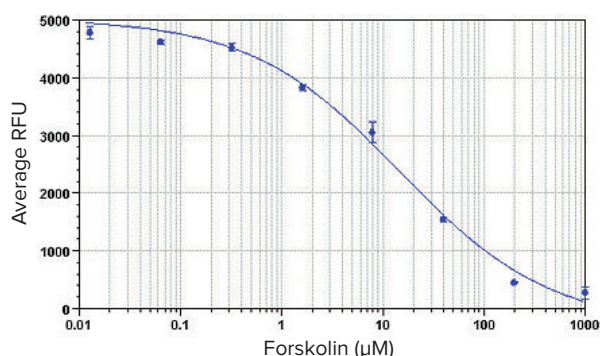


Figure 2. Forskolin dose response in HEK-293 cells. 10,000 cells were stimulated in a volume of 20 μ L for 15 minutes, then lysed and analyzed using the CatchPoint cAMP Fluorescent Assay Kit. Data were generated on a SpectraMax M5 Multi-Mode Microplate Reader.

Flexible read time

The CatchPoint cAMP 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.

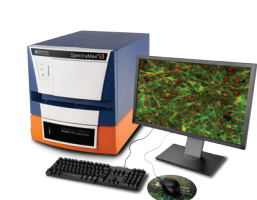
Robust assay performance

The CatchPoint cAMP 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 cAMP, the CatchPoint cAMP Assay Kit can produce useful and reliable data. The EC_{50} of the cAMP calibration curve shows detectable concentrations of cAMP levels at 2.0 nM (Figure 1), while Figure 2 shows a strong dose response to forskolin stimulation in HEK-293 cells.

Ordering information

Item	Description	Part number
CatchPoint cAMP 384-well Fluorescent Assay Kit (Explorer)	ELISA-based assay for the detection and quantification of cAMP * Contains microplates, reagents, and buffers for (2) 384-well microplates	R8044
CatchPoint cAMP 384-well Fluorescent Assay Kit (Bulk)	ELISA-based assay for the detection and quantification of cAMP * Contains microplates, reagents, and buffers for (10) 384-well microplates	R8053
CatchPoint cAMP 96-well Fluorescent Assay Kit (Explorer)	ELISA-based assay for the detection and quantification of cAMP * Contains microplates, reagents, and buffers for (2) 96-well microplates	R8088
CatchPoint cAMP 96-well Fluorescent Assay Kit (Bulk)	ELISA-based assay for the detection and quantification of cAMP * Contains microplates, reagents, and buffers for (10) 96-well microplates	R8089

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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