

## Product datasheet

# Anti-cAMP antibody [EP8471] - BSA and Azide free ab179459

Recombinant RabMAb

5 Images

### Overview

<b>Product name</b>	Anti-cAMP antibody [EP8471] - BSA and Azide free
<b>Description</b>	Rabbit monoclonal [EP8471] to cAMP - BSA and Azide free
<b>Host species</b>	Rabbit
<b>Specificity</b>	This antibody does not cross react with cGMP, GMP, GDP, cIMP, cCMP, or adenosine.
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, ELISA
<b>Species reactivity</b>	<b>Reacts with:</b> Species independent
<b>Immunogen</b>	Chemical/ Small Molecule corresponding to cAMP conjugated to keyhole limpet haemocyanin.
<b>General notes</b>	Ab179459 is the carrier-free version of <a href="#">ab134901</a> . This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes.

Our [carrier-free formats](#) are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency.

Use our [conjugation kits](#) for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

ab179459 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm.

*Maxpar® is a trademark of Fluidigm Canada Inc.*

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMAb® patents](#).

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is

Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

## Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C. Do Not Freeze.
<b>Storage buffer</b>	Constituent: PBS
<b>Carrier free</b>	Yes
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EP8471
<b>Isotype</b>	IgG

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab179459** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use at an assay dependent concentration.
ELISA		Use at an assay dependent concentration.

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## Target

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### Relevance

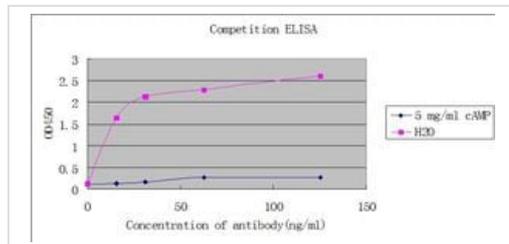
Cyclic adenosine monophosphate (cAMP) plays a key role as an intracellular second messenger for transduction events that follow a number of extracellular signals. The G-Protein Coupled Receptors (GPCR) is the largest family of cell surface receptors. They can be activated by different ligands, such as neurotransmitters, hormones, ions, small molecules, peptides, and other physiological signaling molecules. Typically, the binding of the ligands to its receptor resulting in the activation of G-proteins, in return, activates the effector adenylyl cyclase evoking the production of cAMP. The activation of a protein kinase by cAMP results in the phosphorylation of substrate proteins. Currently successful drugs in marketing have been developed to target these receptors. Among the GPCRs, ~367 receptors are potential drug development targets, but only about 20 have been used to generate therapeutically and commercially successful drugs so far.

Because the involvement of cAMP can amplify the response of the ligand binding, the second messenger cAMP has been largely employed to monitor the activation of the GPCR to facilitate the therapeutic drug discovery.

## Cellular localization

Secreted

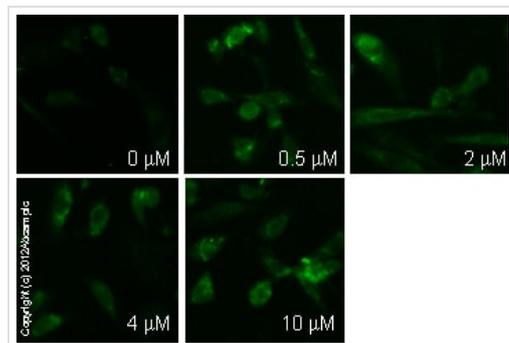
## Images



ELISA - Anti-cAMP antibody [EP8471] - BSA and Azide free (ab179459)

Competitive ELISA assay using [ab134901](#). 50  $\mu$ l cAMP-SPDP-BSA was coated in 96-wells. After 1% BSA blocking, serial dilution of [ab134901](#), 25  $\mu$ l of cAMP, and H<sub>2</sub>O (negative control) were added. HRP conjugated goat anti-rabbit IgG-Fc antibody was used to develop the color.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab134901](#)).

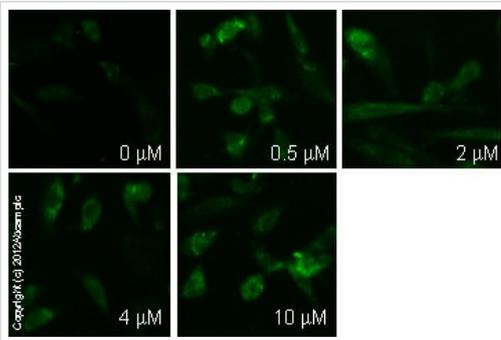


Immunocytochemistry/ Immunofluorescence - Anti-cAMP antibody [EP8471] - BSA and Azide free (ab179459)

[ab134901](#) staining cAMP in SK-N-SH cells treated with (R)-(+)-Methanandamide (ethanol solution) ([ab120361](#)), by ICC/IF. Increase in cAMP expression correlates with increased concentration of (R)-(+)-Methanandamide (ethanol solution), as described in literature.

The cells were incubated at 37°C for 10 minutes in media containing different concentrations of [ab120361](#) ((R)-(+)-Methanandamide (ethanol solution)) in DMSO, fixed with 100% methanol for 5 minutes at -20°C and blocked with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 2h at room temperature. Staining of the treated cells with [ab134901](#) (5  $\mu$ g/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight 488 goat anti-rabbit polyclonal antibody ([ab96899](#)) at 1/250 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab134901](#)).

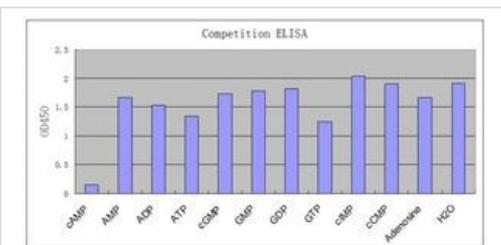


Immunocytochemistry/ Immunofluorescence - Anti-cAMP antibody [EP8471] - BSA and Azide free (ab179459)

This ICC/IF data was generated using the same anti-cAMP antibody clone, EP8471, in a different buffer formulation (cat# [ab134901](#)).

[ab134901](#) staining cAMP in SK-N-SH cells treated with (R)-(+)-Methanandamide (ethanol solution) ([ab120361](#)), by ICC/IF. Increase in cAMP expression correlates with increased concentration of (R)-(+)-Methanandamide (ethanol solution), as described in literature.

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ELISA - Anti-cAMP antibody [EP8471] - BSA and Azide free (ab179459)

This ELISA data was generated using the same anti-cAMP antibody clone, EP8471, in a different buffer formulation (cat# [ab134901](#)).

Competitive inhibition ELISA using [ab134901](#). 50μl of cAMP-SPDP-BSA was coated in 96-wells. After 1% BSA blocking, 25 μl cAMP, AMP, ADP, ATP, cGMP, GMP, GDP, GTP, cIMP, cCMP, Adenosine, H<sub>2</sub>O and 25 μl of [ab134901](#) were added. HRP conjugated goat anti-rabbit IgG-Fc-HR antibody was used to develop the color.

Why choose a recombinant antibody?

- Research with confidence**  
Consistent and reproducible results
- Long-term and scalable supply**  
Recombinant technology
- Success from the first experiment**  
Confirmed specificity
- Ethical standards compliant**  
Animal-free production

Anti-cAMP antibody [EP8471] - BSA and Azide free (ab179459)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### **Our Abpromise to you: Quality guaranteed and expert technical support**

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- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

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