abcam

Product datasheet

Anti-cAMP antibody [SPM486] ab24851

★★★★★ 1 Abreviews 5 References 4 Images

Overview

Product name	Anti-cAMP antibody [SPM486]
Description	Mouse monoclonal [SPM486] to cAMP
Tested applications	**Suitable for:** Flow Cyt, ELISA, ICC/IF, WB
Species reactivity	**Reacts with:** Species independent
Immunogen	Adenosine 3, 5-Cyclic Monophosphate (cAMP) compounds.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.40 Preservative: 0.05% Sodium azide Constituents: BSA, 0.0268% PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	SPM486
Isotype	IgG1

Applications

Our Abpromise guarantee covers the use of **ab24851** 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
Flow Cyt	★★★★★	Use at an assay dependent concentration. ab170190-Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ELISA		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. WB was tested against chemically linked cAMP-carrier protein which was used for antibody screening.

Target

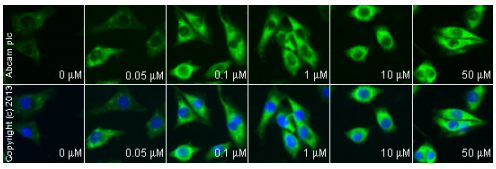
Relevance

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

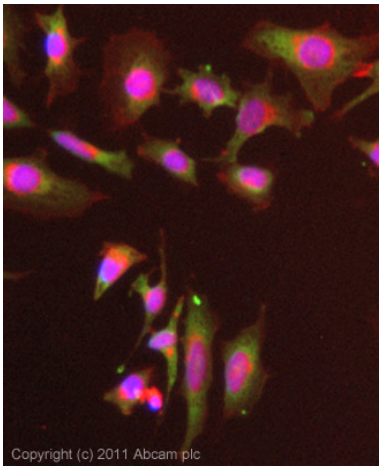
Secreted

Anti-cAMP antibody [SPM486] images



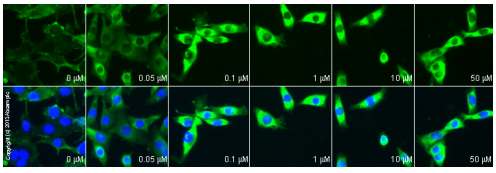
Immunocytochemistry/ Immunofluorescence - Anti-cAMP antibody [SPM486] (ab24851)

ab24851 staining cAMP in MALME-3M cells treated with melanotan II (ab141161), by ICC/IF. Increase of cAMP expression correlates with increased concentration of melanotan II, as described in literature. The cells were incubated at 37°C for 4h in media containing different concentrations of ab141161 (melanotan II) in DMSO, fixed with 4% formaldehyde for 10 minutes at room temperature 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 ab24851 (5 µg/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight 488 anti-mouse polyclonal antibody (ab96879) at 1/250 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI and are shown in blue.



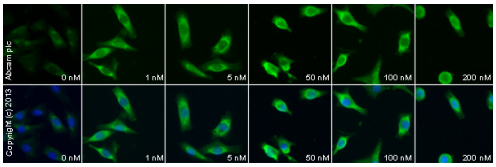
Immunocytochemistry/ Immunofluorescence-cAMP antibody [SPM486](ab24851)

ICC/IF image of ab24851 stained HeLa cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab24851, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunocytochemistry/ Immunofluorescence - Anti-cAMP antibody [SPM486] (ab24851)

ab24851 staining cAMP in MALME-3M cells treated with α-MSH (ab120205), by ICC/IF. Increase of cAMP correlates with increased concentration of α-MSH, as described in literature.
The cells were incubated at 37°C for 2h in media containing different concentrations of ab120205 (α-MSH) in DMSO, fixed with 4% formaldehyde for 10 minutes at room temperature 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 ab24851 (5 µg/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight 488 goat anti-mouse polyclonal antibody (ab96879) at 1/250 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI and are shown in blue.



Immunocytochemistry/ Immunofluorescence - Anti-cAMP antibody [SPM486] (ab24851)

ab24851 staining cAMP in MALME-3M cells treated with α-MSH (ab120189), by ICC/IF. Increase of cAMP correlates with increased concentration of α-MSH as described in literature.
The cells were incubated at 37°C for 6h in media containing different concentrations of ab120189 (α-MSH) in DMSO, fixed with 4% formaldehyde for 10 minutes at room temperature 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 ab24851 (5 µg/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight 488 goat anti-mouse polyclonal antibody (ab96879) at 1/250 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI and are shown in blue.