

cAMP (AM01): sc-73761



The Power to Question

BACKGROUND

cAMP (cyclic adenosine monophosphate), a cyclic nucleotide, is important in many signal transduction pathways as a ubiquitous cytoplasmic second messenger. cAMP is generated from ATP by the removal of one pyrophosphate molecule by adenylate cyclase. The activation of adenylate cyclase typically occurs in association with ligands binding to their G protein-coupled receptors. Adenylate cyclase activation increases the concentration of cAMP in the cell, allowing for the activation of cAMP-dependent protein kinase. The activated kinase amplifies the signal, phosphorylating a number of proteins and altering cellular activity. cAMP is a key intracellular regulator; it mediates the activities of numerous hormones, including ACTH, Glucagon and epinephrine, and plays an important role in modulating calcium transport, regulating gene activation and inducing physiological responses to growth, differentiation and neuro-transmission. Degradation of cAMP is controlled by phosphodiesterases.

REFERENCES

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SOURCE

cAMP (AM01) is a mouse monoclonal antibody raised against cAMP.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and protein stabilizer.

APPLICATIONS

cAMP (AM01) is recommended for detection of cAMP by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of cAMP: 0.3 kDa.

SELECT PRODUCT CITATIONS

1. Sun, M.H., Zheng, J., Xie, F.Y., Shen, W., Yin, S. and Ma, J.Y. 2015. Cumulus cells block oocyte meiotic resumption via gap junctions in cumulus oocyte complexes subjected to DNA double-strand breaks. *PLoS ONE* 10: e0143223.
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3. Lei, R., Bai, X., Chang, Y., Li, J., Qin, Y., Chen, K., Gu, W., Xia, S., Zhang, J., Wang, Z. and Xing, G. 2018. Effects of fullerene nanoparticles on rat oocyte meiosis resumption. *Int. J. Mol. Sci.* 19: 699.
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STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.