

cAMP ELISA Kit

cAMP ELISA Kit (Chemiluminescent)

CATALOG #
AAA44619

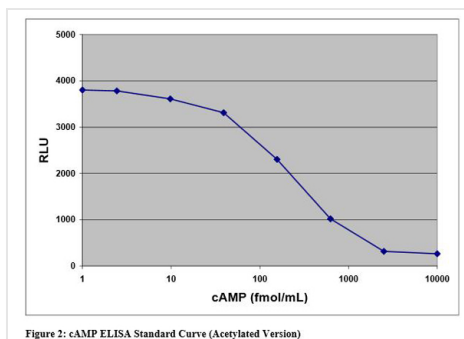
PRODUCT SYNONYMS

cAMP; cAMP ELISA Kit (Chemiluminescent); cAMP elisa kit

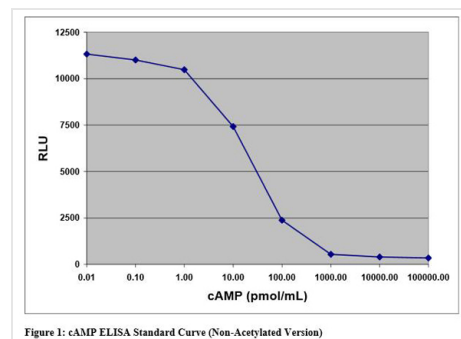
PRODUCT SPECIFICATIONS

Samples	Cell Culture Supernatants, plasma, serum, saliva, urine, and Cell lysates
Preparation and Storage	Store kit components at 4 degree C until their expiration dates. For longer term use, store the Rabbit Anti-cAMP Polyclonal Antibody at -20 degree C.

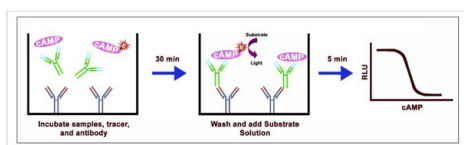
IMAGES



Application Data



Application Data



Application Data

ADDITIONAL INFORMATION

Related Product Information for cAMP elisa kit	Principle of the assay: An anti-Rabbit IgG polyclonal coating antibody is adsorbed onto a microtiter plate. Cyclic AMP present in the sample or standard competes with Peroxidase cAMP Tracer for plate binding, in the presence of Rabbit Anti-cAMP Polyclonal Antibody. Following incubation and wash steps, any Peroxidase cAMP Tracer bound to the plate is detected with addition of Chemiluminescent Reagent. The light product formed is inversely proportional to the amount of cAMP present in the sample. This reaction is then measured in a plate luminometer. A standard curve is prepared from cAMP Standard and sample concentration is then determined. Background: Adenosine 3',5'-cyclic monophosphate (cAMP) is a ubiquitous second messenger involved in various cellular activities in many cell and tissue types. It is converted from adenosine triphosphate (ATP) via adenylyl cyclases (AC), and is inactivated by hydrolysis to 5'-AMP by the actions of phosphodiesterases. cAMP may affect cellular function through several different mechanisms including the activation of cAMP-dependent Protein Kinase (PKA), Guanine Nucleotide Exchange Factors (GEFs), and Cyclic Nucleotide-gated (CNG) channels. PKA is a heterotetramer consisting of 2 regulatory (R) subunits and 2 catalytic (C) subunits. Two cAMP molecules bind cooperatively to 2 sites on each R subunit, releasing the active C subunit monomers to phosphorylate a range of downstream substrates. GEFs facilitate the exchange of GDP for GTP and, therefore, promote the activity of G proteins. Exchange Protein Activated by cAMP (Epac) 1 and 2 are GEFs activated upon binding to cAMP. Epac 1 and 2 have been implicated in regulating the activity of the small GTPase Rap-1 (26, 27). CNG channels are cation channels activated by cGMP and/or cAMP. These channels regulate membrane potential, and due to their Ca²⁺ permeability, can alter the levels of intracellular Ca²⁺. cAMP ELISA Kit is a competitive enzyme immunoassay designed to measure cAMP in cell culture supernatants, plasma, serum, saliva, urine, and cell lysates. The kit selectively measures cAMP levels without any significant cross reactivities to other nucleotides or cyclic nucleotides. Samples containing low cAMP levels may be acetylated (reagents provided) for increased sensitivity. Under non-acetylated conditions, the kit has a detection range of 1 to 1000 pmol/mL cAMP; however, under acetylated conditions, the sensitivity is enhanced (approx 100X) to a detection range of 10-2500 fmol/mL.
Product Categories/Family for cAMP elisa kit	Cell Signaling and Protein Biology; G Protein Signaling/Small GTPase Assays and Vectors; Cyclic AMP Assays
References	1. Hanoune, J. et al. (1997) Mol. Cell. Endocrinol. 128:179. 2. Patel, T.B. et al. (2001) Gene 269:13. 3. Smit, M.J. and R. Iyengar (1998) Adv. Second Messenger Phosphoprotein Res. 32:1. 4. Sunahara, R.K. et al. (1996) Annu. Rev. Pharmacol. Toxicol. 36:461. 5. Sunahara, R.K. and R. Taussig (2002) Mol Interv 2:168. 6. Taylor, S.S. (1989) J. Biol. Chem. 264:8443. 7. Seino, S. and T. Shibasaki (2005) Physiol. Rev. 85:1303. 8. de Rooij, J. et al. (2000) J. Biol. Chem. 275:20829. 9. de Rooij, J. et al. (1998) Nature 396:474. 10. Kaupp, U.B. and R. Seifert (2002) Physiol. Rev. 82:769. 1. Liu, L. et al. (2014). PKCbetaII Acts Downstream of Chemoattractant Receptors and mTORC2 to Regulate cAMP Production and Myosin II Activity in Neutrophils. Mol Biol Cell. 25:1446-1457. 2. Liu, L. et al. (2012). Radil Controls Neutrophil Adhesion and Motility through beta2-Integrin Activation. Mol. Biol. Cell. 23:4751-4765.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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 Online datasheet: <https://www.aaabiotech.com/elisa-kits/camp/44619>