

**Description**

Adenosine 3':5'-cyclic monophosphate (cyclic AMP, cAMP) is one of the most important secondary messengers involved in signal transduction, gene regulation, steroid hormone biosynthesis and intracellular signaling. Its regulatory role extends to the nervous system, cell growth and differentiation, immune mechanisms and general metabolism. Cyclic AMP production is stimulated by compounds (hormones, drugs, neuromodulators) binding to target cells through cell membrane receptors. These binding events activate G-proteins which in turn activate the enzyme adenylate cyclase. Adenylate cyclase converts ATP to cyclic AMP. Cyclic AMP-dependent protein kinases can then be activated resulting in phosphorylation of substrate proteins. Cyclic AMP levels may aid in understanding the mechanism of action of a variety of hormones and biologically active substances.

**Kit Contents**

- cAMP Antibody-Coated Microplate (96 well)
- cAMP Standard
- cAMP Enzyme Conjugate, lyophilized (HRP)
- K-Blue Substrate (TMB)
- EIA Buffer
- Wash Buffer (10x)
- Instruction Booklet

**Cross-reactivity**

Cyclic AMP .....	100.0%
Cyclic GMP .....	0.07%
Adenosine .....	0.01%
Adenine .....	0.01%
AMP .....	0.01%
ADP .....	0.01%
ATP .....	0.01%
Guanine .....	0.01%
GMP .....	0.01%
GTP .....	0.01%

**Specifications**

Sensitivity (acetylated standards):	
80% B/B <sub>0</sub> .....	0.03 ng/mL
50% B/B <sub>0</sub> .....	0.10 ng/mL
Assay Range .....	0.02 – 2.0 ng/mL
Inter-Assay CV .....	≤ 10%
Intra-Assay CV .....	≤ 10%
Size .....	96 well microplate
Assay Sample Size .....	50 µL
Total Assay Incubation Time .....	1.5 hours
Wavelength .....	650 nm, 450 nm with acid stop
Storage Conditions .....	-20°C for lyophilized conjugate, 4°C for all other kit components
Antibody .....	Polyclonal, Goat

**Research use only****Neogen Corporation**

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