CGMP EIA KIT - NO ACETYLATION X 5

Product Highlight

- Based on the unique mouse monoclonal anti-cGMP antibody
- The only assay kit on the market with monoclonal anti-cGMP antibody (all other kits are based on polyclonal anti-cGMP antibodies)
- The monoclonal anti-cGMP antibody displays much higher selectivity over cAMP and GTP, than polyclonal anti-cGMP antibody
- Avoids the batch-to-batch variations associated with polyclonal antibody productions from animals, thus providing the reproducibility

Product Description

Guanosine 3', 5'-cyclic monophosphate (cyclic GMP; cGMP) plays critical regulatory roles in many physiological processes. cGMP is produced from GTP by guanylyl cyclases and is degraded by phosphodiesterases. Stimulation of guanylyl cyclases or inhibition of phosphodiesterases can increase cellular cGMP concentrations. Inhibitors of the cGMP-specific phosphodiesterases are used for treating human diseases. For example, inhibitors of cGMP specific phosphodiesterase type 5 (such as Viagra and Cialis) are used for treating erectile dysfunction.

To screen for inhibitors of phosphodiesterases or stimulators of guanylyl cyclases, it is essential to have a sensitive, selective and reproducible method to measure the cGMP concentrations. This is especially true for the initial screenings given the possible weaker effects of larger pools of compounds.

Currently available other ELISA kits measuring cGMP levels are based on the non-affinity-purified polyclonal anti-cGMP antibody. Despite the claimed selectivity, these polyclonal anti-cGMP antibodies display certain cross-reactivity with cAMP or GTP. In most cell types, cGMP is present at levels ~100 fold lower than cAMP.

NewEast Biosciences cGMP ELISA kit is based on the unique mouse monoclonal anti-cGMP antibody. This monoclonal anti-cGMP antibody displays >10^8 fold of selectivity over cAMP, GTP and other nucleoside analogues. NewEast Biosciences cGMP ELISA kit provides significantly improved sensitivity and selectivity over other kits based on polyclonal anti-cGMP antibodies. Our monoclonal anti-cGMP antibody-based ELISA kit also avoids the batch-to-batch variations associated with polyclonal antibody productions from animals, thus providing the

reproducibility in the long run.

Principle Outline

NewEast Biosciences cGMP ELISA Kit is a competitive immunoassay to measure the cGMP levels, either from cell extracts or from in vitro guanylyl cyclase assays. Briefly, multi-well plates are coated with goat-anti-mouse serum. cGMP in cell extracts or in in vitro guanylyl cyclase assays will competitively bind to the monoclonal anti-cGMP antibody in the presence of fixed amounts of cGMP-conjugated horse-radish peroxidase or alkaline phosphatase. Known amounts of cGMP are used as standards to generate the calculation curve. After a short incubation, the excess reagents are washed away and substrate is added. The multiwell plates are then read on a microplate reader at 450 nm or 405 nm. The intensity of the yellow color is inversely proportional to the concentration of cGMP in samples. The measured optical density is used to calculate the concentration of cGMP in samples based on the curve from the cGMP standards.