
Product Data Sheet

Product Name: cGAMP diammonium

Cat. No.: GC63758

Chemical Properties

Cas. No.

Formula $C_{20}H_{30}N_{12}O_{13}P_2$

M.Wt 708.47

Solubility H_2O : 100 mg/mL (141.15 mM; Need ultrasonic) Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility , please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Background

cGAMP (Cyclic GMP-AMPP) diammonium functions as an endogenous second messenger in metazoans and triggers interferon production in response to cytosolic DNA. cGAMP diammonium activates stimulator of interferon genes (STING), which activates a signaling cascade leading to the production of type I interferons and other immune mediators[1][2][3][4].

cGAMP diammonium promotes the antigen-specific proliferation capacity of spleen cells in mice[2]. cGAMP diammonium directly activates murine and human dendritic cells in vitro[2]. On stimulation with cGAMP diammonium, fibroblasts from the patients showed increased transcription of IFNB1 but not of the genes encoding interleukin-1 (IL1), interleukin-6 (IL6), or tumor necrosis factor (TNF)[3]. cGAMP diammonium activates the endoplasmic reticulum (ER)-resident receptor STING, thereby inducing an antiviral state and the secretion of type I IFNs[4].

cGAMP (5 μg ; nostril mucosal adjuvant) diammonium promotes the antigen-specific cytokine production by spleen cells of immunized mice[2].

[1]. Wu J, et al. Cyclic GMP-AMP is an endogenous second messenger in innate immune signaling by cytosolic DNA. Science. 2013 Feb 15;339(6121):826-30.

Caution: Product has not been fully validated for medical applications. For research use only.

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[2]. Skrnjug I, et al. Cyclic GMP-AMP displays mucosal adjuvant activity in mice. PLoS One. 2014 Oct 8;9(10):e110150.

[3]. Ablasser A, et al. Cell intrinsic immunity spreads to bystander cells via the intercellular transfer of cGAMP. Nature. 2013 Nov 28;503(7477):530-4.

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