

Cyclic GMP (TBAOH)

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.

Biological Description

Description	Cyclic GMP TBAOH is an endogenous second messenger that triggers the production of interferons in response to cytosolic DNA. It activates the stimulator of interferon genes (STING), initiating a signaling cascade that produces type I interferons and other immune mediators. The conjugate of Cyclic GMP TBAOH and AMP, known as Cyclic-GMP-AMP, can induce IRF3 phosphorylation and nuclear translocation to enhance antiviral immune responses. Additionally, Cyclic GMP TBAOH may activate PDE to degrade cAMP, inhibit the calcium current I _{Ca} in cardiomyocytes, and regulate myocardial contractility. Its derivative, 8-Br-cGMP, exhibits antiplatelet activity, making Cyclic GMP TBAOH useful for research in antiviral immunity and cardiovascular diseases.
Targets(IC50)	Endogenous Metabolite,STING
In vitro	ACh stimulates the accumulation of Cyclic GMP (cGMP) TBAOH, activating cGMP-mediated protein kinase. The increase in Cyclic GMP TBAOH reduces Ca ion influx, thereby shortening action potentials and inhibiting I _{Ca} . When Cyclic GMP TBAOH (1 μM; 3-5 min) acts with Isoprenaline, it activates Cyclic GMP TBAOH-stimulated phosphodiesterase, reversing cAMP-mediated enhancement or inhibiting cAMP-induced inward calcium current (I _{Ca}).

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