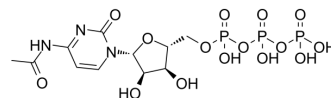


N4-Acetylcytidine triphosphate

Cat. No.:	HY-111815
CAS No.:	1428903-57-4
Molecular Formula:	C ₁₁ H ₁₈ N ₃ O ₁₅ P ₃
Molecular Weight:	525.19
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



SOLVENT & SOLUBILITY

In Vitro

H₂O : ≥ 250 mg/mL (476.02 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM		1.9041 mL	9.5204 mL	19.0407 mL
	5 mM		0.3808 mL	1.9041 mL	3.8081 mL
	10 mM		0.1904 mL	0.9520 mL	1.9041 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

N4-Acetylcytidine triphosphate is efficiently used as a substrate in T7 Polymerase-catalyzed in vitro transcription and can be incorporated into multiple templates^[1].

IC₅₀ & Target

Human Endogenous Metabolite

In Vitro

N4-Acetylcytidine triphosphate (0.1-2 mM; 24-48 h) inhibits BV2 microglia cell growth^[1].
 N4-Acetylcytidine triphosphate (0.3-1 mM; 3-6 h) activates NFκB signaling and upregulates NLRP3 expression^[1].
 N4-Acetylcytidine triphosphate (0.3-1 mM; 3 h) increases the expression level of HMGB1^[1].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.
 Cell Viability Assay^[1]

Cell Line:	BV2 microglia
Concentration:	0.1-2 mM
Incubation Time:	24-48 hours

Result:	Significantly inhibited BV2 microglia cell growth until cultured for 48 hours with a concentration of 0.3 mM.
---------	---

Cell Viability Assay^[1]

Cell Line:	BV2 microglia
Concentration:	0.3 and 1 mM
Incubation Time:	3 and 6 hours
Result:	Increased NLRP3 and NFκB expression at both mRNA and protein levels, activated the NFκB signaling.

Western Blot Analysis^[1]

Cell Line:	BV2 microglia
Concentration:	0.3 and 1 mM
Incubation Time:	3 hours
Result:	Induced HMGB1 expression and it is necessary for NFκB signaling, NLRP3 expression and persistent HMGB1 expression.

CUSTOMER VALIDATION

- Nucleic Acids Res. 2022 Aug 16;gkac675.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Duan J, et al. N4-acetylcytidine is required for sustained NLRP3 inflammasome activation via HMGB1 pathway in microglia. Cell Signal. 2019 Mar 7;58:44-52.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA