Kasugamycin hydrochloride hydrate

Cat. No.: HY-B1864B

CAS No.: 200132-83-8

Molecular Formula: $C_{14}H_{28}ClN_3O_{10}$

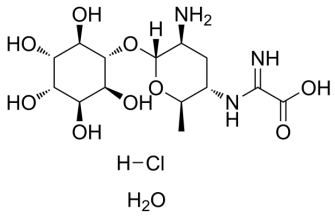
Molecular Weight: 433.84

Target: Bacterial; Antibiotic

Pathway: Anti-infection

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 25 mg/mL (57.62 mM; Need ultrasonic)

DMSO : 1.67 mg/mL (3.85 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3050 mL	11.5250 mL	23.0500 mL
5 mM	0.4610 mL	2.3050 mL	4.6100 mL
10 mM	0.2305 mL	1.1525 mL	2.3050 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 8.33 mg/mL (19.20 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description

Kasugamycin hydrochloride hydrate (Ksg hydrochloride hydrate) is an antibiotic which binds both the 30S and 70S ribosome but not isolated 50S subunits. Kasugamycin hydrochloride hydrate (Ksg hydrochloride hydrate) mimics mRNA nucleotides to destabilize tRNA binding and inhibit canonical translation initiation[1][2].

CUSTOMER VALIDATION

- Front Mol Biosci. 2021 Apr 7;8:640356.

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REFERENCES

[1]. Schluenzen F, et al. The antibiotic kasugamycin mimics mRNA nucleotides to destabilize tRNA binding and inhibit canonical translation initiation. Nat Struct Mol Biol. 2006 Oct;13(10):871-8.

[2]. Schuwirth BS, et al. Structural analysis of kasugamycin inhibition of translation. Nat Struct Mol Biol. 2006 Oct;13(10):879-86.

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