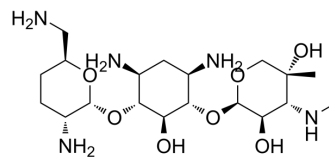


Gentamicin C1a

Cat. No.:	HY-148286
CAS No.:	26098-04-4
Molecular Formula:	C ₁₉ H ₃₉ N ₅ O ₇
Molecular Weight:	449.54
Target:	Antibiotic; Bacterial
Pathway:	Anti-infection
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 250 mg/mL (556.12 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.2245 mL	11.1225 mL	22.2450 mL
	5 mM	0.4449 mL	2.2245 mL	4.4490 mL
	10 mM	0.2224 mL	1.1122 mL	2.2245 mL

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

BIOLOGICAL ACTIVITY

Description

Gentamicin C1a is the precursor of the semi-synthetic antibiotic Etimicin, and has antibacterial activity. Gentamicin C1a is the major component of the Gentamicin complex^{[1][2]}.

In Vitro

Gentamicin C1a inhibits *Escherichia coli*, *P. aeruginosa* and *S. aureus* with an IC₅₀ value of 1 mg/mL^[2].
Gentamicin C1a (2 mM, 48 h) has no effect on viability of OC-k3 cell^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Gentamicin C1a (4 mg/kg, intravenous bolus dose, single) shows a mean residence time of 84 min, CL value of 1.81 mL/min/kg in beagles^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Li D, et al. Construction of a gentamicin C1a-overproducing strain of *Micromonospora purpurea* by inactivation of the *gacD* gene. *Microbiol Res.* 2013 Jun 12;168(5):263-7.

[2]. Ishikawa M, et al. Lower ototoxicity and absence of hidden hearing loss point to gentamicin C1a and apramycin as promising antibiotics for clinical use. *Sci Rep.* 2019 Feb 20;9(1):2410.

[3]. Isoherranen N, et al. Pharmacokinetics of gentamicin C(1), C(1a), and C(2) in beagles after a single intravenous dose. *Antimicrob Agents Chemother.* 2000 Jun;44(6):1443-7.

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

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