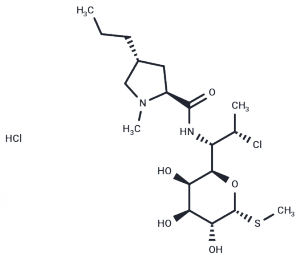
Data Sheet (Cat.No.T6448)

TargetMol

Clindamycin hydrochloride

Chemical Properties



CAS No. : 21462-39-5

Formula: C18H33ClN2O5S·HCl

Molecular Weight: 461.44

Appearance: no data available

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

Biological Description

Description	Clindamycin hydrochloride (Clinimycin HCl) inhibits protein synthesis by acting on the 50S ribosomal. It is the hydrochloride salt form of clindamycin, a semi-synthetic, chlorinated broad-spectrum antibiotic produced by chemical modification of lincomycin. Clindamycin hydrochloride(Clinimycin HCl) is used as a solid in capsules.
Targets(IC50)	Antibacterial,Antibiotic
In vitro	Clindamycin is a classical inhibitor of bacterial protein synthesis which binds to the 23S ribosomal RNA of the 50S ribosomal subunit. [1]
In vivo	Clindamycin hydrochloride is rapidly absorbed orally in dogs, exhibiting a mean absorption time (MAT) of 0.87 hours and a bioavailability of 72.55%. It shows a total clearance (CL) rate post intravenous (IV) and oral administration of 0.503 and 0.458 L/h/kg respectively, and reaches a steady-state volume of distribution (IV) of 2.48 L/kg, indicating extensive distribution throughout the body's fluids and tissues. Serum concentrations of clindamycin remain above 0.5 μg/mL for approximately 10 hours after both IV and oral administration. [1] Additionally, it significantly reduces oral malodor, dental plaque, dental calculus, and gingival bleeding in dogs over a period of 42 days. [2] At a dosage of 2.5 mg/lb following ultrasonic scaling, root planing, and polishing (USRP), clindamycin significantly impacts plaque and pocket depth related to periodontal disease, though not gingivitis. [3] Furthermore, it achieves a complete remission ratio of 71.4% (15/21) in dogs with canine superficial bacterial pyoderma within 14 to 28 days. [4]
Kinase Assay	In vitro potency assays: After RO4929097 is used, the Aβ peptides are measured by ECL assays using a variety of anti-Aβ antibodies and an Origen 1.5 Analyzer. The 4 g8 murine mAb binds an epitope in the Aβ peptide (within amino acids 18–21) that is immediately distal to the α-secretase cleavage site. The G2–10 murine mAb binds the C terminus that is exposed after γ-secretase-mediated cleavage to generate amino acid 40 of the Aβ40 peptide. The FCA3542 rabbit antibody binds the C terminus that is exposed after γ-secretase-mediated cleavage to generate amino acid 42 of the Aβ42 peptide. The 4 g8 mAb is biotinylated with biotin-LC-sulfo-N-hydroxysuccinimide-ester. The G2–10 and FCA3542 antibodies are ruthenylated with TAG-N-hydroxysuccinimide ester. Aβ(x-40) is detected with biotinylated 4 g8 and ruthenylated G2–10. Aβ(x-42) is detected with biotinylated 4 g8 and ruthenylated FCA3542.

Solubility Information

Solubility	DMSO: 75 mg/mL (162.53 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1671 mL	10.8356 mL	21.6713 mL
5 mM	0.4334 mL	2.1671 mL	4.3343 mL
10 mM	0.2167 mL	1.0836 mL	2.1671 mL
50 mM	0.0433 mL	0.2167 mL	0.4334 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Batzias GC, et al. Vet J,2005, 170(3), 339-345.
Warrick JM, et al. Vet Ther,2000, 1(1), 5-16.
Nielsen D, et al. Vet Ther, 2000, 1(3), 150-158.
Bloom PB, et al. J Am Anim Hosp Assoc,2001, 37(6), 537-542.

Tel:781-999-4286 E_mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481