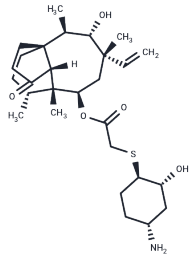
Data Sheet (Cat.No.T7588)

TargetMol

Lefamulin

Chemical Properties



CAS No. : 1061337-51-6

Formula: C28H45NO5S

Molecular Weight: 507.73

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	Lefamulin (BC-3781) is a semi-synthetic compound that inhibits the synthesis of bacterial protein, which is required for bacteria to grow.
Targets(IC50)	Others,Antibacterial,Antibiotic
In vivo	Lefamulin exhibits a unique mechanism of action through inhibition of protein synthesis by binding to the peptidyl transferase center of the 50S bacterial ribosome, thus preventing the binding of transfer RNA for peptide transfer. Lefamulin displays activity against gram-positive and atypical organisms associated with CABP (i.e., Streptococcus pneumoniae, Haemophilus influenzae, Mycoplasma pneumoniae, Legionella pneumophila, and Chlamydophila pneumoniae), with an expanded gram-positive spectrum including Staphylococcus aureus (i.e., methicillin-resistant, vancomycin-intermediate, and heterogeneous strains) and vancomycin-resistant Enterococcus faecium. Lefamulin was also shown to retain activity against multidrug-resistant Neisseria gonorrhoeae and Mycoplasma genitalium. Lefamulin exhibits time-dependent killing, and the pharmacodynamic target best associated with antibacterial activity is ? AUC0-24?/MIC (minimum inhibitory concentration [MIC]).

Solubility Information

Solubility	DMSO: 50 mg/mL (98.48 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 2.5 mg/mL (4.92 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9696 mL	9.8478 mL	19.6955 mL
5 mM	0.3939 mL	1.9696 mL	3.9391 mL
10 mM	0.197 mL	0.9848 mL	1.9696 mL
50 mM	0.0394 mL	0.197 mL	0.3939 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Veve M P , Wagner J L . Lefamulin: Review of a Promising Novel Pleuromutilin Antibiotic[J]. Pharmacotherapy, 2018.