

Product Data Sheet

Product Name: Oleandomycin

Cat. No.: GC10095

Chemical Properties

Cas. No. 3922-90-5

Chemical Name 7-(α -D-galactopyranosyloxy)-4-methyl-2H-1-benzopyran-2-one

SMILES O=C1[C@@H]([C@H]([C@H]([C@H](OC[C@@H]([C@H]([C@@H]([C@H]([C@H](C[C@@H]12CO2)C)O[C@]3([C@@H]([C@H](C[C@H](O3)C)N(C)C)O)[H])C)O[C@@]4(O[C@H]([C@@H]([C@H](C4)OC)O)C)[H])C=O)C)C)O)C

Formula $C_{35}H_{61}NO_{12}$

M.Wt 687.9

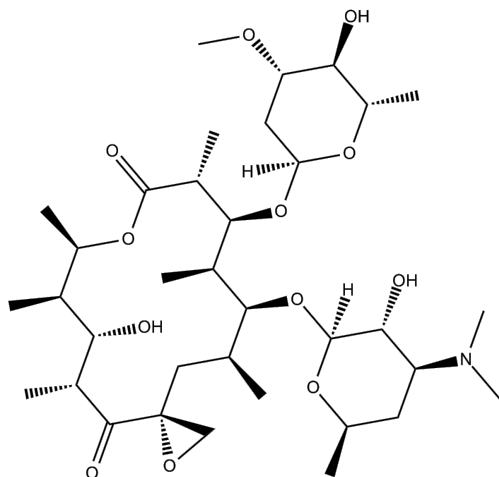
Solubility DMSO : 100 mg/mL (145.38 mM; Need ultrasonic); H_2O : ≥ 12.5 mg/mL (18.17 mM)

Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility , please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

Oleandomycin is an antibiotic produced by strains of Streptomyces.

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

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In vitro: Oleandomycin has been identified as a macrolide antibiotic demonstrating antimicrobial activity similar to penicillin and erythromycin. In addition, oleandomycin structurally has a macrocyclic lactone ring of 14 carbon atoms with one sugar, oleandrose, and one amino sugar, desoxamine [1].

In vivo: The PK of oleandomycin after i.v. and po administration, both alone and after i.m. pretreatment with metamizole or dexamethasone, was studied in healthy dogs. Results showed that after i.v. injection of oleandomycin alone at 10 mg/kg, the $t_{1/2\beta}$, V_d , Cl and AUC were 1.60 h, 1.11 L/kg, 7.36 ml/kg/min and 21.66 $\mu\text{g h/ml}$, respectively. There were no statistically significant differences following pretreatment with metamizole or dexamethasone. In addition, after po administration of oleandomycin alone, the $t_{1/2\beta}$, C_{max} , t_{max} , MAT and Fabs were 1.68 h, 5.34 $\mu\text{g/ml}$, 1.5 h, 1.34 h and 84.29%, respectively, and the pretreatment with metamizole showed a significantly decreased value for C_{max} but the MAT was increased significantly. Statistically significant changes in the PK parameters of oleandomycin following po administration were also seen as a result of pretreatment with dexamethasone. The C_{max} was increased and the t_{max} and MAT were lower [2].

Clinical trial: Up to now, oleandomycin is still in the preclinical development stage.

References:

- [1] C. Vilches, C. Méndez, C. Hardisson, et al. Biosynthesis of oleandomycin by *Streptomyces antibioticus*: Influence of nutritional conditions and development of resistance. J.Gen.Microbiol. 136(8), 1447-1454 (1990).
- [2] Milanova A, Lashev L. Pharmacokinetics of oleandomycin in dogs after intravenous or oral administration alone and after pretreatment with metamizole or dexamethasone. Vet Res Commun. 2002 Jan;26(1):61-71.

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