Product Data Sheet

Product Name: Dovramilast
Cat. No.: GC67967

Chemical Properties

Cas. No.	340019-69-4		
Formula	$C_{24}H_{28}N_2O_6S$	M.Wt	472.55
Solubility	DMSO : 25 mg/mL (52.90 mM; ultrasonic and warming and heat to 60°C)	Storage	4°C, away from moisture and light
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Dovramilast		

Background

Dovramilast (CC-11050) is an orally active phosphodiesterase 4 **(PDE4)** inhibitor and can reduce the inflammatory response and improves Isoniazid (INH)-mediated bacillary clearance from the lungs. Dovramilast, as an adjunct, is used for the research of tuberculosis (TB)[1].

Dovramilast (oral gavage, 5, 25, or 50 mg/kg, single) significantly improves antibiotic-mediated bacterial killing and reduces lung pathology[2].

Pharmacokinetic Parameters of Dovramilast in B6D2F1 mice[2].

Sampling time(h)	Concentration(ng/ml)	
	CC-11050 only	CC-11050+INH
1	1,331.6±136.97	905.35±594.23
2	1,409.47±140.85	1,309.39±214.08
5	948.85±128.7	1,609.18±167.2

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8	820.6±265.98	1,271.73±249.18
24	1.27±1.1	4.96±1.85
T_{max}(h)	2.0	5.0
C_{max}(ng/ml)	1,410	1,610
AUC_{last}(ng × h/ml)	10,200	13,900

Animal Model:	B6D2F1 mice[2]
Dosage:	5, 25, or 50 mg/kg
Administration:	oral, 5, 25, or 50 mg/kg, single
Result:	Reduced PDE4 expression in mtb-infected mouse lungs.
Animal Model:	B6D2F1 mice[2]
Dosage:	5, 25, or 50 mg/kg
Administration:	oral gavage, 5, 25, or 50 mg/kg, single
Result:	Improved antibiotic-mediated bacterial killing and reduced lung pathology.

[1]. International Nonproprietary Names for Pharmaceutical Substances (INN). WHO Drug Information, Vol. 36, No. 2, 2022.
[2]. Selvakumar Subbian, et al. Pharmacologic Inhibition of Host Phosphodiesterase-4 Improves Isoniazid-Mediated Clearance of Mycobacterium tuberculosis. Front Immunol. 2016 Jun 17;7:238.

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