Dovramilast

®

MedChemExpress

Cat. No.:	HY-147263	
CAS No.:	340019-69-4	0 0-
Molecular Formula:	$C_{24}H_{28}N_2O_6S$	
Molecular Weight:	472.55	
Target:	Phosphodiesterase (PDE)	
Pathway:	Metabolic Enzyme/Protease	° S [≤] O
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)	

SOLVENT & SOLUBILITY

	Mass Solvent Concentration	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.1162 mL	10.5809 mL	21.1618 m
	5 mM	0.4232 mL	2.1162 mL	4.2324 mL
	10 mM	0.2116 mL	1.0581 mL	2.1162 ml

BIOLOGICAL ACTIVITY				
Description	Dovramilast (CC-11050) is an orally active phosphodiesterase 4 (PDE4) inhibitor and can reduce the inflammatory response and improves <u>Isoniazid</u> (INH)-mediated bacillary clearance from the lungs. Dovramilast, as an adjunct, is used for the research of tuberculosis (TB) ^[1] .			
IC ₅₀ & Target	PDE4	PDE4		
In Vivo	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+ <u>INH</u>		

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
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

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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.	

REFERENCES

[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.

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

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