Product Data Sheet

Product Name: LPA1 antagonist 1
Cat. No.: GC31958

Chemical Properties

Cas. No.	1396006-71-5		
SMILES	CC(N=N1)=C(NC(O[C@@H](C2=CC=CC=C2)C)=O)N1C3=CC=C(C4=CC=C(C5(CC5)C(O)=O)C=C4)C=C3		
Formula	$C_{28}H_{26}N_4O_4$	M.Wt	482.53
Solubility	Soluble in DMSO	Storage	Store at -20°C
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	LPA1 antagonist 1		

Background

LPA1 antagonist 1 is a highly selective Lysophosphatidic Acid receptor-1 (LPA1) antagonist with an IC50 of 25 nM.

LPA1 antagonist 1 (compound 2) displays very potent and highly selective inhibitory activity toward LPA1, with little inhibition on LPA3 even at very high concentrations. To our knowledge, LPA1 antagonist 1 is the most selective nonlipid LPA1 antagonist so far reported. It appears that compounds (e.g., LPA1 antagonist 1) from the N-aryltriazole chemical class are much more selective for LPA1 than compounds from the corresponding pyrazole series. In comparison with Ki16425 and AM095, LPA1 antagonist 1 shows much improved antiproliferative activity. LPA1 antagonist 1 demonstrates the highest LPA1 selectivity and attenuated LPA-induced NHLF proliferation and contraction with high potency[1].

Oral dosing of LPA1 antagonist 1 in mice causes a dose-dependent reduction in serum histamine levels induced following intravenous LPA stimulation. When mice are orally dosed with LPA1 antagonist 1 (100 mg/kg, aqueous suspension) prior to intravenous LPA

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

injection, the LPA-induced histamine level is significantly blocked A clear PK/PD relationship is demonstrated by the correlation between the levels of LPA1 antagonist 1 and LPA-induced histamine concentrations in plasma. Although AM095 almost completely blocks histamine release (100 mg/kg), analysis of plasma samples revealed more than 65-fold higher concentrations of AM095 than LPA1 antagonist 1 (100 mg/kg). The ability of LPA1 antagonist 1 to block histamine release at much lower plasma concentration suggests that further improvement of pharmacokinetic properties of this chemical class could lower the effective dose[1].

[1]. Qian Y, et al. Discovery of highly selective and orally active lysophosphatidic acid receptor-1 antagonists with potent activity on human lung fibroblasts. J Med Chem. 2012 Sep 13;55(17):7920-39.