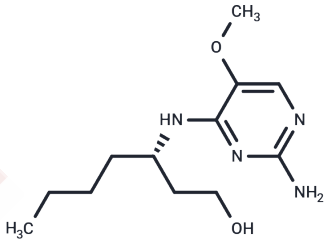
Data Sheet (Cat.No.T212528)

TargetMol

TLR7/8 agonist 13

Chemical Properties



CAS No. : 1402802-45-2

Formula: C12H22N4O2

Molecular Weight: 254.33

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	TLR7/8 agonist 13 is an orally active dual agonist of TLR7 (with a lowest effective concentration (LEC) [hTLR7] of 1.6 μM) and TLR8 (LEC [hTLR8] of 1.6 μM). It acts on human peripheral blood mononuclear cells (hPBMC) with agonistic activity (LEC [hPBMC] = 0.5 μM). In mice and cynomolgus monkeys, TLR7/8 agonist 13 induces endogenous IFNα, activates myeloid dendritic cells and monocytes, promoting their differentiation towards a TH1 phenotype. In chronic AAV-HBV mouse models, it reduces viral load and HBV surface antigen levels. TLR7/8 agonist 13 has the potential to indirectly induce IFNγ, facilitating the response of HBV antigen-specific CD8 T cells. This compound is useful for hepatitis B virus research.
Targets(IC50)	HBV,IFNAR,Interleukin,TLR
In vitro	TLR7/8 agonist 13 (Compound 50 d) stimulates PBMCs to produce IFNα, IFNγ, IL-12p40, IL-12p70, and TNF-α.
In vivo	In a C57Bl/6 mouse model, TLR7/8 agonist 13 (Compound 50 d) (1-50 mg/kg, oral, single dose) induces the response of IFNα, TH1, and myeloid cells. Administered at 5 mg/kg orally once a week for 8 weeks, it inhibits the secretion of HBsAg and reduces HBV viral load through two non-cytotoxic mechanisms in the AAV-HBV C57Bl/6 mouse model. In crab-eating macaques, TLR7/8 agonist 13 (3-30 mg/kg, oral, single dose) stimulates endogenous IFNα production and activates myeloid dendritic cells and monocytes, promoting their development into a TH1 phenotype.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9319 mL	19.6595 mL	39.319 mL
5 mM	0.7864 mL	3.9319 mL	7.8638 mL
10 mM	0.3932 mL	1.9659 mL	3.9319 mL
50 mM	0.0786 mL	0.3932 mL	0.7864 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.