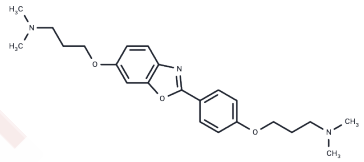
Data Sheet (Cat.No.T61882)

TargetMol

AT791

Chemical Properties



CAS No. : 1219962-49-8

Formula: C23H31N3O3

Molecular Weight: 397.51

Storage: Store at low temperature
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	AT791 is an orally available TLR7 and TLR9 inhibitor, suppressing TLR7 and TLR9 signaling, used in autoimmune lupus research.
Targets(IC50)	TLR
In vitro	AT791 effectively inhibited DNA stimulation of HEK:TLR9 cells with an IC50 value of 40 nM, respectively, but was significantly less effective in inhibiting LPS endotoxin stimulation of HEK:TLR4 cells or R848 HEK:TLR7 cells. Methods: To confirm whether the interaction of AT791 with DNA was associated with its ability to inhibit DNA-TLR9 interaction in cells, a live cell version of the oligonucleotide bait assay was developed. A non-stimulatory version of the oligonucleotide CpG2216 was created by inverting the stimulatory CpG motif to GpC to generate GpC2216. Results: Stimulatory CpG2216 induced IL-6 production in BMDCs, whereas AT791 (10 mM) inhibited this production. However, when an excess of non-stimulatory GpC2216 was added, IL-6 induction was restored. GpC2216 itself, either alone or in the presence of AT791, does not stimulate IL-6 production.[1]
In vivo	Short-term induction of serum interleukin-6 by CpG1668 DNA in mice could be effectively inhibited by pretreatment with AT791 (20 mg/kg).[1]

Solubility Information

Solubility	DMSO: 80 mg/mL (201.25 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (8.3 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5157 mL	12.5783 mL	25.1566 mL
5 mM	0.5031 mL	2.5157 mL	5.0313 mL
10 mM	0.2516 mL	1.2578 mL	2.5157 mL
50 mM	0.0503 mL	0.2516 mL	0.5031 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.

Reference

Lamphier M, et al. Novel small molecule inhibitors of TLR7 and TLR9: mechanism of action and efficacy in vivo. Mol Pharmacol. 2014 Mar;85(3):429-40.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481