AZD8848

Cat. No.: HY-111269

CAS No.: 866269-28-5

Molecular Formula: $C_{29}H_{43}N_7O_5$

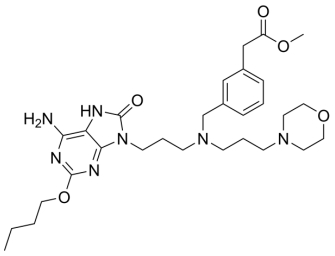
Molecular Weight: 569.7

Target: Toll-like Receptor (TLR)

Pathway: Immunology/Inflammation

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (43.88 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7553 mL	8.7765 mL	17.5531 mL
	5 mM	0.3511 mL	1.7553 mL	3.5106 mL
	10 mM	0.1755 mL	0.8777 mL	1.7553 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (4.39 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (4.39 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.39 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

AZD8848 is a selective toll-like receptor 7 (TLR7) anteagent agonist which is developed for the research of asthma and allergic rhinitis[1].

IC_{50} & Target

TLR7

In Vitro

AZD8848 shows good activity against TLR7, with cellular pEC_{50}s of 7.0 and 6.6 for human TLR7 and rat TLR7, respectively[1]. AZD8848 has an EC_{50} of 4 nM in the induction of IFNα from human PBMCs and an IC_{50} of 0.2-1.0 nM for the inhibition of IL-5,

irrespective of whether the T cells have been polyclonally stimulated with PHA or via antigen presentation[1].
AZD8848 is a potent, selective TLR7 agonist antedrug able to inhibit Th2 responses in vitro[1].
AZD8848 has no activity against human TLR8 or against any of the other human TLRs[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

AZD8848 (0.1-1 mg/kg; intratracheal) has a good pharmacokinetics in the Brown Norway rat[1].
AZD8848 (0.3 mg/kg; Intratracheal) suppresses the ovalbumin (OVA) challenge in the rat allergy model[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Brown Norway rat allergy model[1]
Dosage:	0.1 mg/kg, 1 mg/kg
Administration:	Intratracheal (24 hours prior to and 24 hours after the OVA challenge)
Result:	Suppressed OVA challenge in a dose-dependent manner.

Animal Model:	Brown Norway rat[1]
Dosage:	0.3 mg/kg (Pharmacokinetic Analysis)
Administration:	Intratracheal
Result:	Has a very short half-life (0.2 min) in rat blood and declined slowly after this point and levels above 1000 nmol/kg were maintained for over 5 hours.

CUSTOMER VALIDATION

- Research Square Print. 2023 Feb 1.

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REFERENCES

[1]. Delaney S, et al. Tolerability in man following inhalation dosing of the selective TLR7 agonist, AZD8848. BMJ Open Respir Res. 2016 Feb 23;3(1):e000113.

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