BMS-502

Cat. No.: HY-149874

CAS No.: 2407854-18-4

Molecular Formula: $C_{27}H_{22}F_2N_6O_3$

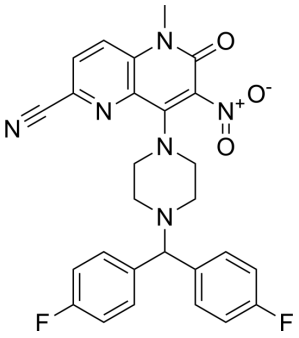
Molecular Weight: 516.5

Target: DGK

Pathway: Metabolic Enzyme/Protease

Storage: -20°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (193.61 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9361 mL	9.6805 mL	19.3611 mL
	5 mM	0.3872 mL	1.9361 mL	3.8722 mL
	10 mM	0.1936 mL	0.9681 mL	1.9361 mL

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

BIOLOGICAL ACTIVITY

Description

BMS-502 (Compound 22) is a potent dual inhibitor of diacylglycerol kinase (DGK) α and ζ with IC_{50} of 4.6 nM and 2.1 nM. BMS-502 enhanced T cell immune responses in mice. BMS-502 can be used in tumor immunity related research[1].

IC_{50} & Target

IC_{50}: 4.6 nM (DGK α), 2.1nM (DGK ζ)[1].

In Vitro

BMS-502 has an EC_{50} value of 340 nM in the mouse cytotoxic T cell IFN-γ assay (mCTC) [1].

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

In Vivo

BMS-502 (Compound 22) (0-10mg/kg; PO; 24h) demonstrates dose-dependent immune stimulation in the mouse OT-1 model [1].

Pharmacokinetic Analysis in C57 black mice Model[1]

Route	Dose (mg/kg)	AUC_{last} (μM•h)	$t_{1/2}$ (h)	T_{max} (h)	C_{max} (μM)	Cl (m/min/kg)	V_{ss} (mL/kg)	F (%)

i.v.	1	14.8	22.5	/	/	1.9	3.9	/
p.o.	5	48	/	3.0	1.08	/	/	65

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

Animal Model:	OT-1 mouse model[1]
Dosage:	0-10 mg/kg
Administration:	Oral administration; 24 h
Result:	Caused no significant increase in activated effector T-cells.

REFERENCES

[1]. Chupak L, et al. Discovery of Potent, Dual-Inhibitors of Diacylglycerol Kinases Alpha and Zeta Guided by Phenotypic Optimization. ACS Med Chem Lett. 2023 Jun 12;14(7):929-935.

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

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