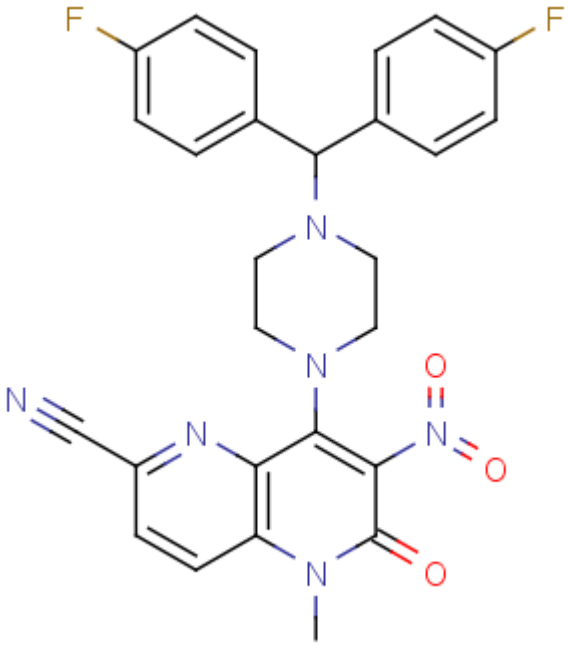
Name: BMS-502 Cat#: EX-A8241

Target:: DGK
Pathway: Metabolic Enzyme/Protease

Chemical Structure:



Chemical Name	1,5-Naphthyridine-2-carbonitrile, 8-[4-[bis(4-fluorophenyl)methyl]-1-piperazinyl]-5,6-dihydro-5-methyl-7-nitro-6-oxo-

Molecular Weight	516.4988	Storage	2 years -20°C powder 6 months -80°C in solvent Away from light
Formula	C27H22F2N6O3		
CAS No.	2407854-18-4	Synonyms	BMS502; BMS 502

Solubility (25°C) *	In vitro	DMSO	Soluble, 100mg/mL (Need ultrasonic)
		Ethanol	N/A
		Water	N/A
	In vivo (should be freshly prepared each time)		

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Selleck tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.

Preparing Stock Solutions:

Mass / Volume / 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

*The above data is based on the product molecular weight 516.50.

Biological Activities:

Description	BMS-502 (Compound 22) is a potent dual inhibitor of diacylglycerol kinase (DGK) α and ζ with IC50 of 4.6 nM and 2.1 nM. BMS502 enhanced T cell immune responses in mice[1].
IC_{50} & Targe	IC50: 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]
In Vivo	BMS-502 (Compound 22) (0-10mg/kg; PO; 24h) demonstrates dose-dependent immune stimulation in the mouse OT-1 model[1].

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.