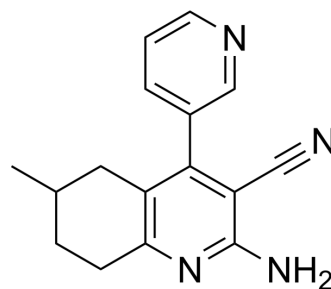


BRD6989

Cat. No.:	HY-122586		
CAS No.:	642008-81-9		
Molecular Formula:	C ₁₆ H ₁₆ N ₄		
Molecular Weight:	264.33		
Target:	CDK; Interleukin Related		
Pathway:	Cell Cycle/DNA Damage; 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 (94.58 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
Preparing Stock Solutions	1 mM	3.7831 mL	18.9157 mL	37.8315 mL
	5 mM	0.7566 mL	3.7832 mL	7.5663 mL
	10 mM	0.3783 mL	1.8916 mL	3.7832 mL
Please refer to the solubility information to select the appropriate solvent.				
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (7.87 mM); Clear solution			

BIOLOGICAL ACTIVITY

Description	BRD6989, an analog of the natural product cortistatin A (dCA), inhibits CDK8 and upregulates IL-10. BRD6989 selectively binds a complex of CDK8 with an IC ₅₀ of ~200 nM. BRD6989 inhibits the kinase activity of recombinant CDK8 or CDK19 complexes ^[1] .			
IC₅₀ & Target	CDK8 ~200 nM (IC ₅₀)	recombinant CDK8 ~0.5 μM (IC ₅₀)	recombinant CDK19 >30 μM (IC ₅₀)	IL-10
In Vitro	Pretreatment of BMDCs with BRD6989 (0-100 μM; for 48 hours) increases IL-10 production with an EC ₅₀ of ~1 μM ^[1] . BRD6989 (0.6, 1.7, 5, 15 μM) suppresses phosphorylation of the STAT1 transactivation domain at Ser727 in IFNγ-stimulated BMDCs ^[1] . BRD6989 (5 μM; ~2 hours) suppresses induction of STAT1-STAT2 activity and NF-κB activation to a varying degree after stimulation of BMDMs ^[1] .			

BRD6989 (5 μ M; 24 hours) enhances IL-10 production in activated human and murine macrophages and dendritic cells^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Johannessen L, et al. Small-molecule studies identify CDK8 as a regulator of IL-10 in myeloid cells. Nat Chem Biol. 2017 Oct;13(10):1102-1108

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

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