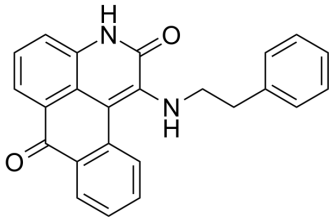
BRD7389

Cat. No.:	HY-12185
CAS No.:	376382-11-5
Molecular Formula:	$C_{24}H_{18}N_2O_2$
Molecular Weight:	366.41
Target:	Ribosomal S6 Kinase (RSK)
Pathway:	MAPK/ERK Pathway
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 20.83 mg/mL (56.85 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7292 mL	13.6459 mL	27.2918 mL
	5 mM	0.5458 mL	2.7292 mL	5.4584 mL
	10 mM	0.2729 mL	1.3646 mL	2.7292 mL

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

BIOLOGICAL ACTIVITY

Description

BRD7389 is a specific RSK family kinase inhibitor with IC_{50}s of 1.5 μM, 2.4 μM, and 1.2 μM for RSK1, RSK2, and RSK3, respectively. BRD7389 is a small-molecule inducer of insulin expression in pancreatic α-cells[1].

IC_{50} & Target

RSK1 1.5 μM (IC_{50})	RSK2 2.4 μM (IC_{50})	RSK3 1.2 μM (IC_{50})	CDK5/p35 6.5 μM (IC_{50})
DRAK1 2.8 μM (IC_{50})	FLT3 3.5 μM (IC_{50})	PIM1 3.7 μM (IC_{50})	PKG1α 6.5 μM (IC_{50})
SGK 13.8 μM (IC_{50})			

In Vitro

BRD7389 (0.425-6.8 μM) induces insulin expression in mouse α-cells after 3 days treatment. BRD7389 induces a dose-dependent up-regulation of insulin (Ins2) mRNA, peaking at 0.85 μM; 5 days treatment with BRD7389 results in greater induction of insulin gene expression, about 50-fold at 0.85 μM[1].
BRD7389 (0.85-6.8μM) significantly up-regulates Pdx1 mRNA expression in mouse α-cell line[1].
BRD7389 also increases β-cell-specific gene expression in primary human islet cells[1].

BRD7389 (1 μM; added 30 min prior to Carbachol treatment 48 h) fully abolishes carbachols timulated cell proliferation, but has little effect on the basal level of proliferation[2].

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

RT-PCR[1]

Cell Line:	Mouse α-cell line
Concentration:	0.425, 0.85, 1.7, 3.4, 6.8 μM
Incubation Time:	3 days and 5 days
Result:	Up-regulated expression of Pdx1.

Cell Proliferation Assay[2]

Cell Line:	SNU-407 colon cancer cell
Concentration:	1 μM
Incubation Time:	Added 30 min prior to Carbachol treatment (48 h)
Result:	Almost completely blocked Carbachol (1 mM)-stimulated cell proliferation.

CUSTOMER VALIDATION

- Cell Death Dis. 2022 Oct 8;13(10):856.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Fomina-Yadlin D, et al. Small-molecule inducers of insulin expression in pancreatic alpha-cells. Proc Natl Acad Sci U S A. 2010 Aug 24;107(34):15099-104.

[2]. Park YS, et al. EGFR and PKC are involved in the activation of ERK1/2 and p90 RSK and the subsequent proliferation of SNU-407 colon cancer cells by muscarinic acetylcholine receptors. Mol Cell Biochem. 2012 Nov;370(1-2):191-8.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA