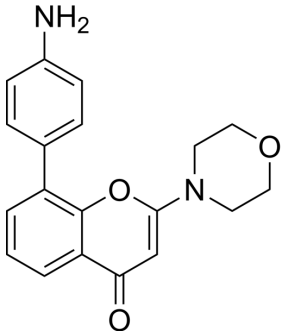
PI-828

Cat. No.:	HY-108606
CAS No.:	942289-87-4
Molecular Formula:	$C_{19}H_{18}N_2O_3$
Molecular Weight:	322.36
Target:	PI3K; Casein Kinase
Pathway:	PI3K/Akt/mTOR; Cell Cycle/DNA Damage; Stem Cell/Wnt
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 : ≥ 12.5 mg/mL (38.78 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.1021 mL	15.5106 mL	31.0212 mL
5 mM	0.6204 mL	3.1021 mL	6.2042 mL
10 mM	0.3102 mL	1.5511 mL	3.1021 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: ≥ 1.25 mg/mL (3.88 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (3.88 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PI-828 is a dual PI3K and casein kinase 2 (CK2) inhibitor with IC_{50}s of 173 nM, 149 nM, and 1127 nM for p110α, CK2, and CK2 α2 in lipid kinase assay, respectively[1].

IC_{50} & Target

p110α	CK2	CK2α2
173 nM (IC_{50})	149 nM (IC_{50})	1.127 μM (IC_{50})

In Vitro

PI-828 (0.01-100 μM) exhibits cytotoxic effect on the 4T1 breast cancer cells and 4306 ovarian cancer cells[2].
PI-828 (0.78-3.12 μM; 48 hours) decreases caspase 3 activation; higher concentrations of PI-828 (6.25-12.5 μM) alone causes apoptosis[3].

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

Cell Viability Assay[2]

Cell Line:	4T1 breast cancer cells and 4306 ovarian cancer cells
Concentration:	0.01, 0.1, 1, 10 and 100 μM
Incubation Time:	
Result:	Exhibited cytotoxic effect.

Apoptosis Analysis[3]

Cell Line:	Human embryonic carcinoma NCCIT cells
Concentration:	0.78, 1.56, 3.12, 6.25, 12.5 μM
Incubation Time:	48 hours
Result:	Concentrations of ranging from 0.78 to 3.12 μM decreased caspase 3 activation; higher concentrations caused apoptosis.

CUSTOMER VALIDATION

- Molecules. 2020 Apr 23;25(8):1980.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Gharbi SI, et al. Exploring the specificity of the PI3K family inhibitor LY294002. Biochem J. 2007 May 15;404(1):15-21.

[2]. Zellefrow CD, et al. Identification of druggable targets for radiation mitigation using a small interfering RNA screening assay. Radiat Res. 2012 Sep;178(3):150-9.

[3]. Kulkarni AA, et al. Supramolecular nanoparticles that target phosphoinositide-3-kinase overcome insulin resistance and exert pronounced antitumor efficacy. Cancer Res. 2013 Dec 1;73(23):6987-97.

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