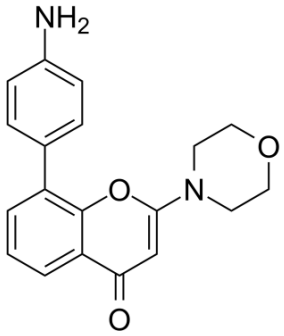
PI-828

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



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.

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.

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