SGC-CK2-1

Cat. No.: HY-139004

CAS No.: 2470424-39-4

Molecular Formula: $C_{20}H_{21}N_7O$

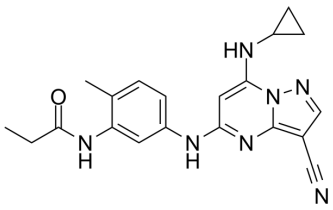
Molecular Weight: 375.43

Target: Casein Kinase

Pathway: 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 : 100 mg/mL (266.36 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6636 mL	13.3181 mL	26.6361 mL
	5 mM	0.5327 mL	2.6636 mL	5.3272 mL
	10 mM	0.2664 mL	1.3318 mL	2.6636 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: ≥ 2.5 mg/mL (6.66 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.66 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SGC-CK2-1 is a highly potent, ATP-competitive, and cell-active CK2 chemical probe with exclusive selectivity for both human CK2 isoforms, with IC_{50}s of 36 and 16 nM for CK2α and CK2α′respectively in the nanoBRET assay. SGC-CK2-1 can be used for the research of neurodegenerative diseases[1][2].

IC_{50} & Target

CK2α	CK2α'
36 nM (IC_{50})	16 nM (IC_{50})

In Vitro

SGC-CK2-1 inhibits CSNK2A2 and CSNK2A1 with IC_{50}s value of 2.3 and 4.2 nM[1].
SGC-CK2-1 inhibits DYRK2 with the IC_{50} value of 3.7 μM[1].
SGC-CK2-1 inhibits blood U-937, MV4-11, MOLM-13, OCI-LY19, OCI-AML5 cells with IC_{50}s of 120, 690, 750, 760 and 810 nM,

respectively. SGC-CK2-1 inhibits Head/Neck Detroit562 cells with an IC_{50} of 550 nM. SGC-CK2-1 inhibits Lung NCI-H2286 cells with an IC_{50} of 550 nM. SGC-CK2-1 inhibits Brain SK-N-MC cells with an IC_{50} of 730 nM. SGC-CK2-1 inhibits Breast BT-20 cells with an IC_{50} of 810 nM. SGC-CK2-1 inhibits Skin A375 cells with an IC_{50} of 830 nM. SGC-CK2-1 inhibits Stomach SNU-1 cells with an IC_{50} of 860 nM. SGC-CK2-1 inhibits Duodenum Hutu 80 cells with an IC_{50} of 920 nM[1].

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

REFERENCES

[1]. Carrow I Wells, et al. Development of a potent and selective chemical probe for the pleiotropic kinase CK2. Cell Chem Biol. 2021 Apr 15;28(4):546-558.e10.

[2]. Marco P Licciardello, et al. A New Chemical Probe Challenges the Broad Cancer Essentiality of CK2. Trends Pharmacol Sci. 2021 May;42(5):313-315.

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