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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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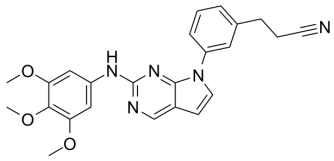
Casein Kinase II Inhibitor IV

Cat. No.:	HY-111378
CAS No.:	863598-09-8
Molecular Formula:	$C_{24}H_{23}N_5O_3$
Molecular Weight:	429.47
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 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (77.61 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3285 mL	11.6423 mL	23.2845 mL
5 mM	0.4657 mL	2.3285 mL	4.6569 mL
10 mM	0.2328 mL	1.1642 mL	2.3285 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 (5.82 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Casein Kinase II Inhibitor IV is a potent, ATP-competitive of casein kinase II inhibitor with an IC_{50} of 9 nM. Casein Kinase II Inhibitor IV ia also a human keratinocytes (NHEK) differentiation inducer[1].

IC_{50} & Target

Target: Casein Kinase[1]

In Vitro

Treatment of human epidermal keratinocytes (NHEKs) with Casein Kinase II Inhibitor IV leads to an increase in the early differentiation markers keratins 1 and 10 at 48 h. Increased levels of IVL and TGM are observed in cells treated with Casein Kinase II Inhibitor IV at 72 h and persisted at 96 h. In addition, treated with Casein Kinase II Inhibitor IV expressesloricrin, a terminal differentiation marker, at later time points. Similar results are observed by messenger RNA (mRNA) expression analysis of NHEKs treated with Casein Kinase II Inhibitor IV. At early time points (12 and 24 h), treatment with Casein Kinase II Inhibitor IV leads to the upregulation of keratinocyte early differentiation marker genes, including keratin 1 (5.4-fold) and keratin 10 (5.4-fold). Terminal differentiation marker genes, including IVL (1.8-fold), TGM 1 (4.8-fold), loricrin (3.3-fold), and

filaggrin (5.6-fold), are upregulated at late time points (36 and 48 h). These results are again consistent with the ability of Casein Kinase II Inhibitor IV to induce differentiation of epidermal progenitor cells into terminally differentiated keratinocytes[1].

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

PROTOCOL

Kinase Assay [1]

For reporter gene assays with transiently transfected cells, the cells are typically transfected in 150 mm-diam dishes when 30-40% confluent. A reporter plasmid, pGL3/3.7 kbp-IVLLuc plasmid, is transfected into the NHEKs. After 24 h, the transfected cells are plated into 96-well assay plates and treated with compound (Casein Kinase II Inhibitor IV) to a final concentration of 5 μM. After incubation for 2 d, reporter gene activity is measured using the Bright-Glo luciferase assay system[1].

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

REFERENCES

[1]. Hong J, et al. Identification and characterization of small-molecule inducers of epidermal keratinocyte differentiation. ACS Chem Biol. 2007 Mar 20;2(3):171-5.

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