

Product Datasheet

Casein Kinase II Inhibitor IV

Catalog No. **BP-01673** · CAS **863598-09-8** · Form **free base** · Physical state **solid** · Color **light yellow to yellow** · Version **1.0** · Revision **2026-09-11**

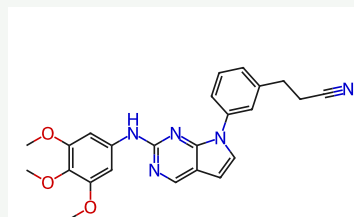
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Target Casein Kinase	Research area Metabolic Disease
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Molecular formula **C₂₄H₂₃N₅O₃**

Molecular weight **429.4711**

STRUCTURE



DESCRIPTION

Casein Kinase II Inhibitor IV is a potent, ATP-competitive of casein kinase II inhibitor with an IC₅₀ of 9 nM. Casein Kinase II Inhibitor IV ia also a human keratinocytes (NHEK) differentiation inducer.

BIOLOGICAL ACTIVITY

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.

SOLUBILITY

Soluble in DMSO

In vitro DMSO : 33.33 mg/mL

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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