trans-Zeatin

Cat. No.: HY-19700

CAS No.: 1637-39-4

Molecular Formula: $C_{10}H_{13}N_5O$

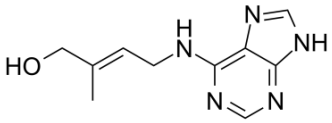
Molecular Weight: 219.24

Target: MEK; ERK; Endogenous Metabolite

Pathway: MAPK/ERK Pathway; Stem Cell/Wnt; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (570.15 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.5612 mL	22.8061 mL	45.6121 mL
	5 mM	0.9122 mL	4.5612 mL	9.1224 mL
	10 mM	0.4561 mL	2.2806 mL	4.5612 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 (5.70 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (5.70 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (5.70 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

trans-Zeatin is a plant cytokinin, which plays an important role in cell growth, differentiation, and division; trans-Zeatin also inhibits UV-induced MEK/ERK activation.

IC_{50} & Target			
	MEK	ERK	Human Endogenous Metabolite

In Vitro

trans-Zeatin is a plant cytokinin, which plays an important role in cell growth, differentiation, and division[1]. trans-Zeatin (20, 40 or 80 μM) inhibits UV-induced MEK/ERK activation, upregulates AQP3 in a time- and dose-dependent manner, and attenuates UV induced loss of AQP3 in keratinocytes (HaCaT cells). UV-induced AQP3 downregulation is blocked by MEK/ERK

inhibitors. Trans-Zeatin (80 μM) attenuates UV-induced downregulation of wound healing and water permeability in HaCaT cells[2].

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

REFERENCES

[1]. Li Q, et al. Endogenous trans-zeatin content in plants with different metal-accumulating ability: a field survey. Environ Sci Pollut Res Int. 2016 Dec;23(23):23422-23435. Epub 2016 Sep 9.

[2]. Ji C, et al. Trans-Zeatin attenuates ultraviolet induced down-regulation of aquaporin-3 in cultured human skin keratinocytes. Int J Mol Med. 2010 Aug;26(2):257-63.

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