Leucettine L41

Cat. No.: HY-117049

CAS No.: 1112978-84-3

Molecular Formula: $C_{17}H_{13}N_3O_3$

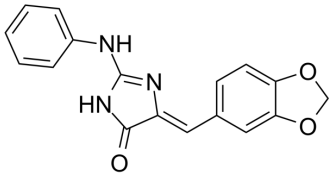
Molecular Weight: 307.3

Target: CDK; DYRK

Pathway: Cell Cycle/DNA Damage; Protein Tyrosine Kinase/RTK

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 (325.41 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2541 mL	16.2707 mL	32.5415 mL
	5 mM	0.6508 mL	3.2541 mL	6.5083 mL
	10 mM	0.3254 mL	1.6271 mL	3.2541 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 (8.14 mM); Clear solution; Need ultrasonic and warming and heat to 80°C

BIOLOGICAL ACTIVITY

Description

Leucettine L41 is a potent inhibitor of dual-specificity tyrosine phosphorylation-regulated kinase 1A (DYRK1A), DYRK2, CDC-like kinase 1 (CLK1), and CLK3 (IC_{50}s = 0.04, 0.035, 0.015, and 4.5 μM, respectively)[1]. Leucettine L41 prevents lipid peroxidation and the accumulation of reactive oxygen species (ROS) induced by $A\beta_{25-35}$ in the hippocampus in a mouse model of Alzheimer's disease-like toxicity. Leucettine L41 also prevents memory deficits induced by $A\beta_{25-35}$ in the same model[2].

REFERENCES

[1]. Debdab M, et al. Leucettines, a class of potent inhibitors of cdc2-like kinases and dual specificity, tyrosine phosphorylation regulated kinases derived from the marine sponge leucettamine B: modulation of alternative pre-RNA splicing. J Med Chem. 2011 Ju

[2]. Naert G, et al. Leucettine L41, a DYRK1A-preferential DYRKs/CLKs inhibitor, prevents memory impairments and neurotoxicity induced by oligomeric Aβ25-35 peptide administration in mice. Eur Neuropsychopharmacol. 2015 Nov;25(11):2170-82.

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