(Z)-4EGI-1

Cat. No.: HY-19831A

CAS No.: 901787-88-0

Molecular Formula: $C_{18}H_{12}Cl_2N_4O_4S$

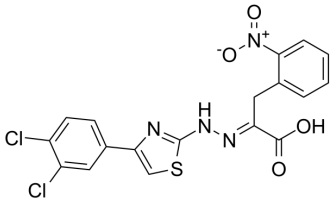
Molecular Weight: 451.28

Target: Eukaryotic Initiation Factor (eIF)

Pathway: Cell Cycle/DNA Damage

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 : 50 mg/mL (110.80 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2159 mL	11.0796 mL	22.1592 mL
	5 mM	0.4432 mL	2.2159 mL	4.4318 mL
	10 mM	0.2216 mL	1.1080 mL	2.2159 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 (5.54 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

(Z)-4EGI-1 is the Z-isomer of 4EGI-1 and is an inhibitor of eIF4E/eIF4G interaction and of translation initiation. (Z)-4EGI-1 effectively binds to eIF4E with an IC_{50} of 43.5 μM and a K_d value of 8.74 μM. (Z)-4EGI-1 has anticancer activity[1][2].

IC_{50} & Target

eIF4

In Vitro

(Z)-4EGI-1 (15-30 μM; 6 hours; CRL-2813 melanoma cells) treatment markedly reduces the expressions of the regulatory proteins: cyclin D1, cyclin E, and Survivin, while the expressions of housekeeping proteins such as β-Actin and α-Tubulin are not affected[1].

(Z)-4EGI-1 inhibits cancer cells proliferation with IC_{50} values of 15.3 μM and 11.6 μM for CRL-2351 breast cells and CRL-2813 melanoma cells, respectively[2].

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

Western Blot Analysis[1]

Cell Line:	CRL-2813 melanoma cells
Concentration:	15 μM, 30 μM
Incubation Time:	6 hours
Result:	Markedly reduced the expressions of the regulatory proteins: cyclin D1, cyclin E, and Survivin.

REFERENCES

[1]. Khuloud Takrouri, et al. Structure-activity Relationship Study of 4EGI-1, Small Molecule eIF4E/eIF4G Protein-Protein Interaction Inhibitors. Eur J Med Chem. 2014 Apr 22;77:361-77.

[2]. Poornachandran Mahalingam, et al. Synthesis of Rigidified eIF4E/eIF4G inhibitor-1 (4EGI-1) Mimetic and Their in Vitro Characterization as Inhibitors of Protein-Protein Interaction. J Med Chem. 2014 Jun 26;57(12):5094-111.

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