CeMMEC1

Cat. No.: HY-111445

CAS No.: 440662-09-9

Molecular Formula: $C_{19}H_{16}N_2O_4$

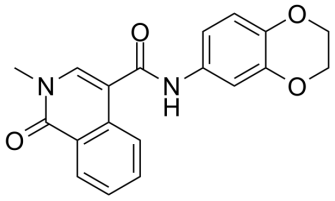
Molecular Weight: 336.34

Target: Epigenetic Reader Domain; DNA/RNA Synthesis

Pathway: Epigenetics; Cell Cycle/DNA Damage

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 : 100 mg/mL (297.32 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9732 mL	14.8659 mL	29.7318 mL
	5 mM	0.5946 mL	2.9732 mL	5.9464 mL
	10 mM	0.2973 mL	1.4866 mL	2.9732 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.43 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

CeMMEC1 is an inhibitor of BRD4, and also has high affinity for TAF1, with an IC_{50} of 0.9 μM for TAF1, and a K_d of 1.8 μM for TAF1 (2).

IC_{50} & Target

Kd: 1.8 μM (TAF1 (2))[1]
IC50: 0.9 μM (TAF1)[1]

In Vitro

CeMMEC1 is an inhibitor of BRD4, and also has high affinity for TAF1, with an IC_{50} of 0.9 μM for TAF1, and a K_d of 1.8 μM for TAF1 (2) and slso shows high affinity for the bromodomains of CREBBP, EP300, BRD9. CeMMEC1 (1, 10, 20 μM) decreases the number of THP1 cells in S phase in a dose manner. CeMMEC1 also induces apoptosis. CeMMEC1 in combination with (S)-JQ1 displays potently impaired cell viability than treatment alone[1].

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

PROTOCOL

Kinase Assay [1]	TAF1 binding assays are conducted using the EPIgeneous Binding Domain kit B. Binding is determined by the displacement of an acetylated biotin peptide from a GST-tagged TAF1 protein using HTRF with a Eu^{3+}-conjugated GST antibody donor and streptavidin-conjugated acceptor. Compounds (CeMMEC1) are dispensed into assay plates, ProxiPlate-384 Plus using an Echo 525 Liquid Handler. Binding assays are conducted in a final volume of 20 µL with 5 nM TAF1-GST, 50 nM peptide (SGRGK (ac)GGK (ac)GLGK (ac)GGAK (ac)RHRK (biotin)-acid), 6.25 nM Streptavidin-XL665, 1:200 Anti-GST-Eu^{3+} cryptate and 0.1% DMSO. Assay reagents are dispensed into plates using a Multidrop combi and incubated at room temperature for 3 h. Fluorescence is measured using a PHERAstar microplate reader using the HTRF module with dual emission protocol (A = excitation of 320 nm, emmission of 665 nm, and B = excitation of 320 nm, emission of 620 nm). Raw data are processed to give an HTRF ratio (channel A/B × 10,000), which is used to generate IC_{50} curves[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Cell Assay [1]	Cells are seeded on clear flat-bottom 96-well or 384-well plates and treated with the indicated compounds (CeMMEC1) for the specified conditions. Live-cell imaging pictures are taken with the Operetta High Content Screening System, 20× objective and nonconfocal mode[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Sdelci S, et al. Mapping the chemical chromatin reactivation landscape identifies BRD4-TAF1 cross-talk. Nat Chem Biol. 2016 Jul;12(7):504-10.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA