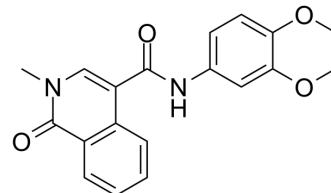


CeMMEC1

Cat. No.:	HY-111445		
CAS No.:	440662-09-9		
Molecular Formula:	C ₁₉ H ₁₆ N ₂ O 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)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	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).
IC₅₀ & Target	Kd: 1.8 μM (TAF1 (2)) ^[1] IC ₅₀ : 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 also 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 potentially 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 Eu³⁺-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-Eu³⁺ 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, emission 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 IC₅₀ 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.

Caution: Product has not been fully validated for medical applications. For research use only.

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