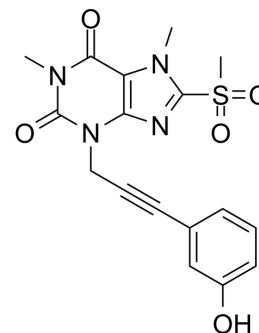


TC13172

Cat. No.:	HY-101524		
CAS No.:	2093393-05-4		
Molecular Formula:	C ₁₇ H ₁₆ N ₄ O ₅ S		
Molecular Weight:	388.4		
Target:	Mixed Lineage Kinase		
Pathway:	MAPK/ERK Pathway		
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 : 25 mg/mL (64.37 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		2.5747 mL	12.8733 mL	25.7467 mL
		5 mM		0.5149 mL	2.5747 mL	5.1493 mL
10 mM			0.2575 mL	1.2873 mL	2.5747 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.25 mg/mL (5.79 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.25 mg/mL (5.79 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	TC13172 is a mixed lineage kinase domain-like protein (MLKL) inhibitor with an EC ₅₀ value of 2 nM for HT-29 cells ^[1] .
IC₅₀ & Target	EC ₅₀ : 2±0.6 nM (MLKL, in HT-29 cells) ^[1] .
In Vitro	The anti-necroptosis potency of TC13172 is evaluated in the HT-29 cell line, the EC ₅₀ value is 2±0.6 nM. TC13172 has an inhibition potency of 2 nM against cell necroptosis. TC13172 inhibits MLKL by directly binding to Cys-86. TC13172 does not disrupt the phosphorylation of MLKL, but do decrease the level of MLKL in the membrane phase, demonstrating that these MLKL inhibitors block the translocation of MLKL to the cell membrane, thereby protecting cells from necroptosis ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[1]

Human colorectal adenocarcinoma (HT)-29 cells are incubated with compound 12 (1 mM) or DMSO for 2 h. For the binding competition experiment samples, cells are pre-incubated with 5 mM NSA or 100 nM TC13172 for 2 h, 1 mM compound 12 is then added and incubated for an additional 2 h. The click reaction (Biotin-C₂H₄-N₃ 10 mM, TBTA 10 mM, CuSO₄ 50 mM, Sodium ascorbate 50 mM) is carried out with cell lysates for 2 h. The biotinmodified proteins are enriched and analysed by western blotting using antibodies against flag and GAPDH^[1].

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

CUSTOMER VALIDATION

- Cell Death Differ. 2023 Jun 10.
- Sci Rep. 2023 Feb 22;13(1):3095.

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REFERENCES

[1]. Bo Yan, et al. Discovery of a new class of highly potent necroptosis inhibitors targeting the mixed lineage kinase domain-like protein. ChemCommun (Camb). 2017 Mar 28;53(26):3637-3640.

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

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