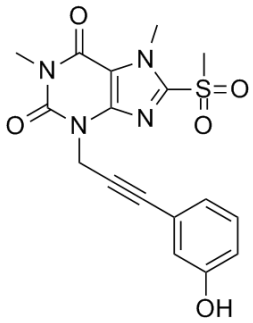
TC13172

Cat. No.:	HY-101524		
CAS No.:	2093393-05-4		
Molecular Formula:	$C_{17}H_{16}N_4O_5S$		
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	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (**64.37 mM;** Need ultrasonic)
H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	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

1. 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
2. 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.
IC_{50} & Target	EC50: 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].

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-C_2H_4-N_3 10 mM, TBTA 10 mM, $CuSO_4$ 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.

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.

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