RTC-5

Cat. No.: HY-123952

CAS No.: 1423077-49-9

Molecular Formula: $C_{24}H_{22}ClF_3N_2O_3S$

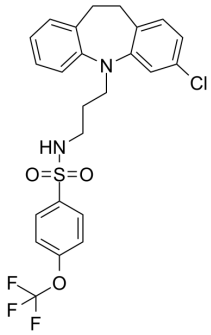
Molecular Weight: 510.96

Target: EGFR

Pathway: JAK/STAT Signaling; Protein Tyrosine Kinase/RTK

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 : 15 mg/mL (29.36 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9571 mL	9.7855 mL	19.5710 mL
	5 mM	0.3914 mL	1.9571 mL	3.9142 mL
	10 mM	0.1957 mL	0.9786 mL	1.9571 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: ≥ 1.5 mg/mL (2.94 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.5 mg/mL (2.94 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

RTC-5 (TRC-382) is an optimized phenothiazine with anti-cancer potency. RTC-5 demonstrates efficacy against a xenograft model of an EGFR driven cancer, its effects is attributed to concomitant negative regulation of PI3K-AKT and RAS-ERK signaling[1].

IC_{50} & Target

IC50: EGFR[1]

In Vitro

RTC-5 (0-40 μM; 48 hours) inhibits H1650 lung adenocarcinoma cell growth with an GI_{50} of 12.6μM[1].
RTC-5 (20-40 μM; 24 hours) negatively regulates PI3K-AKT and RAS-ERK pathways by decreasing phospho-AKT and phospho-ERK levels expression[1].

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

Cell Viability Assay[1]

Cell Line:	H1650 lung adenocarcinoma cells
Concentration:	0 μM, 1 μM, 10 μM, 20 μM, 30 μM, 40 μM
Incubation Time:	48 hours
Result:	Inhibited H1650 lung adenocarcinoma cell growth.

Western Blot Analysis[1]

Cell Line:	H1650 lung adenocarcinoma cells
Concentration:	20 μM, 40 μM
Incubation Time:	24 hours
Result:	Decreased p-AKT, p-ERK expression.

REFERENCES

[1]. Kastrinsky DB, et al. Reengineered tricyclic anti-cancer agents. Bioorg Med Chem. 2015 Oct 1;23(19):6528-34.

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