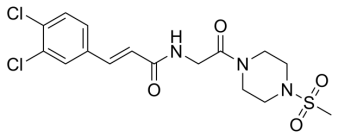
SR18662

Cat. No.:	HY-136530
CAS No.:	2505001-62-5
Molecular Formula:	$C_{16}H_{19}Cl_2N_3O_4S$
Molecular Weight:	420.31
Target:	KLF
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 : 125 mg/mL (297.40 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3792 mL	11.8960 mL	23.7920 mL
	5 mM	0.4758 mL	2.3792 mL	4.7584 mL
	10 mM	0.2379 mL	1.1896 mL	2.3792 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (4.95 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.95 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SR18662 is a potent inhibitor of Krüppel-like factor five (KLF5) with an IC_{50} of 4.4 nM and an analogue of ML264 (HY-19994) with improved inhibitory potency against colorectal cancer cells. SR18662 can be used for the study of colorectal cancer[1].

IC_{50} & Target

IC50: 4.4 nM (KLF5)[1]

In Vitro

SR18662 (0-10 μM; 24-72 hours) significantly reduces growth and proliferation of CRC cells as compared to treatment with vehicle control, ML264 (HY-19994). It shows improved efficacy in reducing viability of multiple CRC cell lines[1].
SR18662 (10 μM; 24-72 hours) shows a significant increase in the number of apoptotic cells at both early and late states in DLD-1 and HCT116 cells[1].
SR18662 (1 μM; 72 hours) reduces the expression of cyclins (cyclins E, A2, and B1) and components of MAPK (p-Erk) and WNT

signaling pathways (p-GSK3 β) in cells[1].

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

Cell Viability Assay[1]

Cell Line:	CRC cells
Concentration:	0-10 μM
Incubation Time:	24 hours, 48 hours, 72 hours
Result:	Induced anti-tumor activity in colorectal cancer cell lines.

Apoptosis Analysis[1]

Cell Line:	DLD-1 and HCT116 cells
Concentration:	10 μM
Incubation Time:	24 hours, 48 hours, 72 hours
Result:	Increased apoptosis of colorectal cancer cell lines.

Western Blot Analysis[1]

Cell Line:	DLD-1 and HCT116 cells
Concentration:	1 μM
Incubation Time:	72 hours
Result:	Reduced levels of cyclins E, A2, and B1 inhibits activity of MAPK, WNT/β-catenin signaling pathways and decreases the levels of cyclins.

In Vivo

SR18662 (intraperitoneal injection; 5-10 mg/kg; daily or twice daily; 5 days injection, days break, and 5 days) significantly reduces the growth of tumors in a mouse xenograft model[1].

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Animal Model:	Nude mice with DLD-1 cells[1]
Dosage:	5 mg/kg; 10 mg/kg; 25 mg/kg
Administration:	Intraperitoneal injection; 5mg/kg daily, 5mg/kg twice a day,10 mg/kg daily, 10 mg/kg twice per day, 25mg/kg daily, and 25 mg/kg twice per day; 5 days of injections, 2 days break, and 5 days of injections
Result:	Caused a significant dose-dependent inhibition of xenograft growth in mice.

REFERENCES

[1]. Julie Kim,et al.The Novel Small-Molecule SR18662 Efficiently Inhibits the Growth of Colorectal Cancer In Vitroand In Vivo.Mol Cancer Ther.2019 Nov;18(11):1973-1984.

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

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