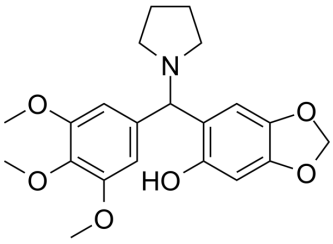
NSC-370284

Cat. No.:	HY-122258
CAS No.:	116409-29-1
Molecular Formula:	$C_{21}H_{25}NO_6$
Molecular Weight:	387.43
Target:	STAT; TET Protein
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt; Epigenetics
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 : 100 mg/mL (258.11 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.5811 mL	12.9056 mL	25.8111 mL
5 mM	0.5162 mL	2.5811 mL	5.1622 mL
10 mM	0.2581 mL	1.2906 mL	2.5811 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: ≥ 2.5 mg/mL (6.45 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.45 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

NSC-370284 is a selective inhibitor of ten-eleven translocation 1 (TET1) and 5-hydroxymethylcytosine (5hmC). NSC-370284 significantly inhibits the level of TET1 expression via targets STAT3/5[1].

IC_{50} & Target			
	STAT3	STAT5	TET1

In Vitro

NSC-370284 (0-500 nM; 24 h or 48 h) inhibits the viability of MONOMAC-6, THP-1, KOCL-48 and KASUMI-1 acute myeloid leukemia (AML) cells via targeting STAT3/5. NSC-370284 significantly down-regulates the level of TET1 transcription[1].

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

Cell Viability Assay[1]

Cell Line:	AML cell lines including MONOMAC-6, THP-1, KOCL-48, and KASUMI-1.
Concentration:	0, 25, 50, 200 or 500 nM.
Incubation Time:	24 h or 48 h.
Result:	Showed inhibitory for AML cells viability and TET1 transcription.

In Vivo

NSC-370284 (2.5 mg/kg; i.p., once daily for 10 days) improves the pathological morphologies in peripheral blood (PB), bone marrow (BM), spleen, and liver tissues in MLL-AF9 acute myeloid leukemia (AML) mice model[1].

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

Animal Model:	C57BL/6 (CD45.2) and B6.SJL (CD45.1) mice[1].
Dosage:	2.5 mg/kg.
Administration:	Intraperitoneal injection, once daily, for 10 days.
Result:	Significantly inhibited MLL-AF9 induced AML in secondary bone marrow transplantation (BMT) recipient mice.

REFERENCES

[1]. Jiang X, et al. Targeted inhibition of STAT/TET1 axis as a therapeutic strategy for acute myeloid leukemia. Nat Commun. 2017 Dec 13;8(1):2099.

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