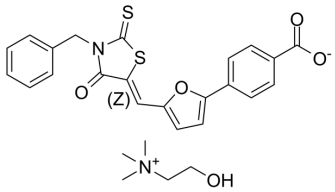
ADH-503

Cat. No.:	HY-15701B
CAS No.:	2055362-74-6
Molecular Formula:	$C_{27}H_{28}N_2O_5S_2$
Molecular Weight:	524.65
Target:	Complement System
Pathway:	Immunology/Inflammation
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

Methanol : 100 mg/mL (190.60 mM; Need ultrasonic)
DMSO : 21.43 mg/mL (40.85 mM; Need ultrasonic)
Ethanol : 3.33 mg/mL (6.35 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.9060 mL	9.5302 mL	19.0603 mL
5 mM	0.3812 mL	1.9060 mL	3.8121 mL
10 mM	0.1906 mL	0.9530 mL	1.9060 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: ≥ 2.14 mg/mL (4.08 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.14 mg/mL (4.08 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.08 mg/mL (3.96 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

ADH-503 ((Z)-Leukadherin-1 choline) is an orally active and allosteric CD11b agonist. ADH-503 leads to the repolarization of tumor-associated macrophages, reduction in the number of tumor-infiltrating immunosuppressive myeloid cells, and enhances dendritic cell responses[1].

IC_{50} & Target

CD11b[1]

In Vitro

ADH-503 ((Z)-Leukadherin-1 choline; 4 μM; 8 days) reduces the numbers of total tumor-infiltrating $CD11b^+$ cells and subsets

of CD11b^{+} monocytes, granulocytes, eosinophils, and macrophages[1].

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

In Vivo

ADH-503 ((Z)-Leukadherin-1 choline; oral gavage; 30, 60, or 120 mg/kg; twice a day for 60 days) delayes tumor progression, leading to a significantly decreased tumor burden in time-point analysis and improved overall survival[1].

ADH-503 (oral gavage; 30, 100 mg/kg; twice a day; on days 1 and 5) has the mean half-life of 4.68 and 3.95 hours, a maximum concentration of 1716 and 2594 ng/mL and AUC_{0-t} in the plasma of 6950 and 13962 ng.h/mL at 30 and 100 mg/kg dosing, respectively[1].

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

Animal Model:	KPC mice [p48-CRE/Lox-stop-Lox(LSL)-Kras^{G12D}/p53$^{flox/flox}$][1]
Dosage:	30, 60, or 120 mg/kg
Administration:	Oral gavage; 60 days
Result:	Delayed tumor progression, leading to a significantly decreased tumor burden in time-point analysis and improved overall survival.

Animal Model:	Male rats[1]
Dosage:	30, 100 mg/kg (Pharmacokinetic Analysis)
Administration:	Oral gavage twice a day; on days 1 and 5
Result:	Had the mean half-life of 4.68 and 3.95 hours, a maximum concentration of 1716 and 2594 ng/mL and AUC_{0-t} in the plasma of 6950 and 13962 ng.h/mL at 30 and 100 mg/kg dosing, respectively.

REFERENCES

[1]. Panni RZ, et al. Agonism of CD11b reprograms innate immunity to sensitize pancreatic cancer to immunotherapies. Sci Transl Med. 2019 Jul 3;11(499).

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