Olitigaltin

Cat. No.: HY-19940

CAS No.: 1450824-22-2

Molecular Formula: $C_{28}H_{30}F_2N_6O_8S$

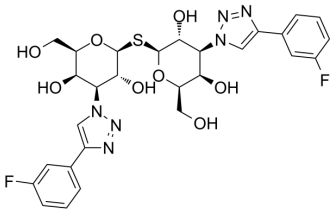
Molecular Weight: 648.64

Target: Galectin

Pathway: Immunology/Inflammation

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 : 50 mg/mL (77.08 mM; Need ultrasonic)

H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.5417 mL	7.7084 mL	15.4169 mL
5 mM	0.3083 mL	1.5417 mL	3.0834 mL
10 mM	0.1542 mL	0.7708 mL	1.5417 mL

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

In Vivo

1. Add each solvent one by one: 45% PEG300 >> 5% Tween-80 >> 50% saline
   Solubility: 10 mg/mL (15.42 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% HP-β-CD in Saline water
   Solubility: 3.33 mg/mL (5.13 mM); Clear solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (3.85 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.85 mM); Clear solution
5. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.85 mM); Clear solution
6. Add each solvent one by one: 15% Cremophor EL >> 85% Saline
   Solubility: 2 mg/mL (3.08 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description	TD139 is a synthetic galectin-3 inhibitor. TD139 has high affinity for galectin-3 with a K_d of 68 nM, a K_d of 0.22 μM for galectin-1, and a K_d of 38 μM for galectin-7[1].
IC_{50} & Target	Kd: 14 nM (galectin-3)[1]
In Vivo	In primary lung AECs TD139 reduces TGF-β1–induced β-catenin translocation to the nucleus, with most of the β-catenin remaining at the cell surface. TD139 blocks TGF-β1–induced β-catenin phosphorylation. A marked reduction in fibrosis and β-catenin activation accompanied by decreased galectin-3 expression is observed in the lungs of WT mice treated with TD139[1]. Pretreatment of WT C57BL/6 mice with TD139 leads to the attenuation of liver injury and milder infiltration of IFNγ- and IL-17- and -4-producing CD4(+) T cells, as well as an increase in the total number of IL-10-producing CD4(+) T cells and F4/80(+) CD206(+) alternatively activates macrophages and preventes the apoptosis of liver-infiltrating MNCs[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [2]	Mice: The susceptibility to Con A-induced hepatitis in galectin-3-deficient mice is tested and the effects of pretreatment with a selective inhibitor of Gal-3 (TD139) in wild-type(WT) C57BL/6 mice are analyzed, as evaluated by a liver enzyme test, quantitative histology, mononuclear cell (MNC) infiltration, cytokine production, intracellular staining of immune cells, and percentage of apoptotic MNCs in the liver[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Autophagy. 2021 Oct 6;1-29.
- J Neuroinflammation. 17 September 2022.
- Stem Cell Res Ther. 2021 Jul 16;12(1):409.
- Chem Biol Interact. 9 October 2022, 110218.
- Exp Neurol. 2023 Apr 19;114418.

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REFERENCES

[1]. Mackinnon AC, et al. Regulation of transforming growth factor-β1-driven lung fibrosis by galectin-3. Am J Respir Crit Care Med. 2012 Mar 1;185(5):537-46.

[2]. Volarevic V, et al. Galectin-3 deficiency prevents concanavalin A-induced hepatitis in mice. Hepatology. 2012 Jun;55(6):1954-64.

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