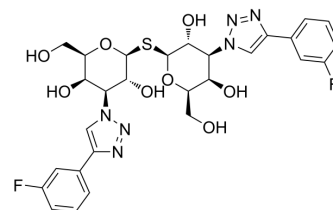


Olitigaltin

Cat. No.:	HY-19940
CAS No.:	1450824-22-2
Molecular Formula:	C ₂₈ H ₃₀ F ₂ N ₆ O ₈ S
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)
 Ethanol : ≥ 3.33 mg/mL (5.13 mM)
 H₂O : ≥ 1 mg/mL (1.54 mM)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	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

- Add each solvent one by one: 45% PEG300 >> 5% Tween-80 >> 50% saline
Solubility: 10 mg/mL (15.42 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% HP-β-CD
Solubility: 3.33 mg/mL (5.13 mM); Clear solution; Need ultrasonic
- 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
- 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
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (3.85 mM); Clear solution
- 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 an inhaled galectin-3 inhibitor with a K_d of 14 nM.
IC ₅₀ & Target	Kd: 14 nM (galectin-3) ^[1]
In Vitro	TD139 is a novel synthetic inhibitor of galectin-3. TD139 has high affinity for galectin-3 with a K_d of 14 nM and 10 nM for galectin-1, but low affinity for galectins 2, 4N, 4C, 7, 8N, or 9N ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In primary lung AECs TD139 reduces TGF- β 1-induced β -catenin translocation to the nucleus, with most of the β -catenin remaining at the cell surface. TD139 blocks TGF- β 1-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 IFN γ - 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 prevents 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.
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CUSTOMER VALIDATION

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

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REFERENCES

- [1]. Mackinnon AC, et al. Regulation of transforming growth factor- β 1-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.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA