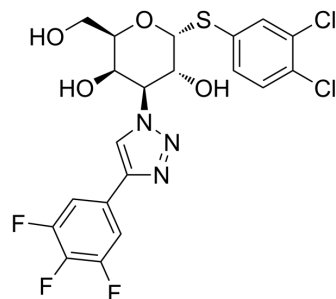


GB1107

Cat. No.:	HY-114409
CAS No.:	1978336-61-6
Molecular Formula:	C ₂₀ H ₁₆ Cl ₂ F ₃ N ₃ O ₄ S
Molecular Weight:	522.32
Target:	Galectin
Pathway:	Immunology/Inflammation
Storage:	-20°C, stored under nitrogen
	* In solvent : -80°C, 2 years; -20°C, 1 year (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (95.73 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.9145 mL	9.5727 mL	19.1453 mL
	5 mM	0.3829 mL	1.9145 mL	3.8291 mL
	10 mM	0.1915 mL	0.9573 mL	1.9145 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (4.79 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (4.79 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (4.79 mM); Clear solution
- Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline
Solubility: 2.5 mg/mL (4.79 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 5% DMSO >> 95% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (4.79 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

GB1107 is a potent, selective, orally active inhibitor of Galectin-3 (Gal-3) with a K_d of 37 nM for human Galectin-3. GB1107 reduces human and mouse lung adenocarcinoma growth and blocks metastasis in the syngeneic model^[1].

IC₅₀ & Target

Galectin-3

In Vitro	<p>Treatment with GB1107 (0-1 μM) increases tumor M1 macrophage polarization and CD8+ T cell infiltration in LLC cells by flow cytometric analysis. GB1107 potentiates the effects of a PD-L1 immune checkpoint inhibitor to increase expression of cytotoxic (IFN-γ, granzyme B, perforin-1, Fas ligand) and apoptotic (cleaved caspase-3) effector molecules^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
In Vivo	<p>GB1107 (10 mg/kg, p.o., once daily from day 18-30 post implantation) treatment results in significantly reduced tumor growth and final tumor weights^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" data-bbox="345 415 1515 653"> <tr> <td data-bbox="345 415 617 478">Animal Model:</td> <td data-bbox="617 415 1515 478">CD-1 nude female mice received 3×10^6 human lung adenocarcinoma cells (A549)^[1].</td> </tr> <tr> <td data-bbox="345 478 617 541">Dosage:</td> <td data-bbox="617 478 1515 541">10 mg/kg</td> </tr> <tr> <td data-bbox="345 541 617 604">Administration:</td> <td data-bbox="617 541 1515 604">Oral once daily from day 18-30 post implantation.</td> </tr> <tr> <td data-bbox="345 604 617 653">Result:</td> <td data-bbox="617 604 1515 653">Resulted in significantly reduced tumor growth and final tumor weights.</td> </tr> </table>	Animal Model:	CD-1 nude female mice received 3×10^6 human lung adenocarcinoma cells (A549) ^[1] .	Dosage:	10 mg/kg	Administration:	Oral once daily from day 18-30 post implantation.	Result:	Resulted in significantly reduced tumor growth and final tumor weights.
Animal Model:	CD-1 nude female mice received 3×10^6 human lung adenocarcinoma cells (A549) ^[1] .								
Dosage:	10 mg/kg								
Administration:	Oral once daily from day 18-30 post implantation.								
Result:	Resulted in significantly reduced tumor growth and final tumor weights.								

CUSTOMER VALIDATION

- Carbohydr Polym. 2023 Dec 7, 121668.
- Cell Death Dis. 2021 Mar 26;12(4):327.
- Phytomedicine. 2023 Nov 17, 155188.
- Cancers (Basel). 2022, 14(11), 2704.
- Oncol Lett. 2023 Nov 1.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Vuong L, et al. An orally active galectin-3 antagonist inhibits lung adenocarcinoma growth and augments response to PD-L1 blockade. Cancer Res. 2019 Jan 23. pii: canres.2244.2018.

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

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