

Product data sheet



MedKoo Cat#: 207088 Name: GB1107 CAS: 1978336-61-6 Chemical Formula: C ₂₀ H ₁₆ Cl ₂ F ₃ N ₃ O ₄ S Exact Mass: 521.0191 Molecular Weight: 522.3202	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

GB1107 is a potent, selective, orally active galectin-3 inhibitor with K_d of 37 nM. GB1107 Inhibits Lung Adenocarcinoma Growth and Augments Response to PD-L1 Blockade.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	50.0	95.73

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.91 mL	9.57 mL	19.15 mL
5 mM	0.38 mL	1.91 mL	3.83 mL
10 mM	0.19 mL	0.96 mL	1.91 mL
50 mM	0.04 mL	0.19 mL	0.38 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Sharma S, Cwiklinski K, Sykes DE, Mahajan SD, Chevli K, Schwartz SA, Aalinkeel R. Use of Glycoproteins-Prostate-Specific Membrane Antigen and Galectin-3 as Primary Tumor Markers and Therapeutic Targets in the Management of Metastatic Prostate Cancer. *Cancers (Basel)*. 2022 May 30;14(11):2704. doi: 10.3390/cancers14112704. PMID: 35681683; PMCID: PMC9179331.

In vivo study

1. Vuong L, Kouverianou E, Rooney CM, McHugh BJ, Howie SEM, Gregory CD, Forbes SJ, Henderson NC, Zetterberg FR, Nilsson UJ, Leffler H, Ford P, Pedersen A, Gravelle L, Tantawi S, Schambye H, Sethi T, MacKinnon AC. An Orally Active Galectin-3 Antagonist Inhibits Lung Adenocarcinoma Growth and Augments Response to PD-L1 Blockade. *Cancer Res*. 2019 Apr 1;79(7):1480-1492. doi: 10.1158/0008-5472.CAN-18-2244. Epub 2019 Jan 23. PMID: 30674531.

7. Bioactivity

Biological target:

GB1107 is a potent, selective, orally active inhibitor of Galectin-3 (Gal-3) with a K_d of 37 nM for human Galectin-3.

In vitro activity

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Additionally, the exposure of LNCaP cells to 2-PMPA showed a dose-dependent effect with ~52% cell death at 200 nM ($p < 0.001$) and no quantifiable cell death in LNCaP-KD and PC-3 cells (Figure 4B). However, GB1107 by itself showed dose-dependent cytotoxic effect on all cell lines with ~60% cell death at 10 μ M, the highest dose (Figure 4C).

Reference: Cancers (Basel). 2022 May 30;14(11):2704. <https://pubmed.ncbi.nlm.nih.gov/35681683/>

In vivo activity

Oral administration of a novel small molecule galectin-3 inhibitor GB1107 reduced human and mouse lung adenocarcinoma growth and blocked metastasis in the syngeneic model. Treatment with GB1107 increased tumor M1 macrophage polarization and CD8+ T-cell infiltration. Moreover, GB1107 potentiated 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.

Reference: Cancer Res. 2019 Apr 1;79(7):1480-1492. <https://pubmed.ncbi.nlm.nih.gov/30674531/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.