

# PRODUCT INFORMATION

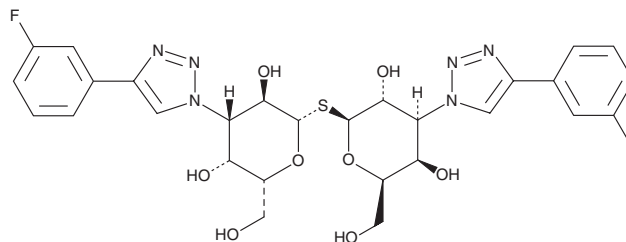


## TD139

Item No. 28400

**CAS Registry No.:** 1450824-22-2  
**Formal Name:** 3-deoxy-3-[4-(3-fluorophenyl)-1H-1,2,3-triazol-1-yl]-β-D-galactopyranosyl 3-deoxy-3-[4-(3-fluorophenyl)-1H-1,2,3-triazol-1-yl]-1-thio-β-D-galactopyranoside

**MF:** C<sub>28</sub>H<sub>30</sub>F<sub>2</sub>N<sub>6</sub>O<sub>8</sub>S  
**FW:** 648.6  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 248 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

TD139 is supplied as a crystalline solid. A stock solution may be made by dissolving the TD139 in the solvent of choice, which should be purged with an inert gas. TD139 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of TD139 in ethanol is approximately 25 mg/ml and approximately 30 mg/ml in DMSO and DMF.

TD139 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TD139 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. TD139 has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

TD139 is an inhibitor of galectin-3.<sup>1</sup> It binds selectively to galectin-3 ( $K_d = 0.036 \mu\text{M}$ ) over galectin-1 and galectin-7 ( $K_d = 2.2$  and  $32 \mu\text{M}$ , respectively) at 4°C, but it is not selective over galectin-1 in a fluorescence anisotropy assay ( $K_d = 0.014$  and  $0.01 \mu\text{M}$  for galectin-3 and -1, respectively).<sup>1,2</sup> It is selective for galectin-3 and galectin-1 over galectin-2, -4N, -4C, -7, -8N, -9N, and -9C ( $K_d = >5, 0.17, 0.14, 1.9, 86, 0.68,$  and  $0.12 \mu\text{M}$ , respectively) in a fluorescence anisotropy assay.<sup>2</sup> TD139 (10  $\mu\text{M}$ ) decreases galectin-3 accumulation induced by amitriptyline (Item No. 15881) in MCF-7 cells. It reduces TGF-β1-induced nuclear translocation and phosphorylation of β-catenin in isolated mouse lung alveolar epithelial cells.<sup>3</sup> TD139 also reduces β-catenin activation in the lung and lung fibrosis in a mouse model of idiopathic pulmonary fibrosis induced by bleomycin (Item No. 13877) when administered via lung instillation at a dose of 10  $\mu\text{g}/\text{animal}$ .

### References

1. Dion, J., Deshayes, F., Storozhylova, N., *et al.* Lactosamine-based derivatives as tools to delineate the biological functions of galectins: Application to skin tissue repair. *ChemBiochem* **18(8)**, 782-789 (2017).
2. Delaine, T., Collins, P., MacKinnon, A., *et al.* Galectin-3-binding glycomimetics that strongly reduce bleomycin-induced lung fibrosis and modulate intracellular glycan recognition. *ChemBiochem* **17(18)**, 1759-1770 (2016).
3. MacKinnon, A.C., Gibbons, M.A., Farnworth, S.L., *et al.* Regulation of transforming growth factor-β1-driven lung fibrosis by galectin-3. *Am. J. Respir. Crit. Care Med.* **185(5)**, 537-546 (2012).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 09/12/2019

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM