

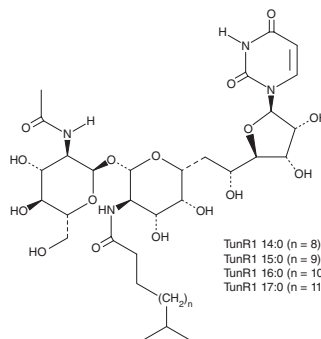
# PRODUCT INFORMATION



## TunR1

Item No. 31537

**MF:**  $C_{39}H_{66}N_4O_{16}$  (for TunR1 16:0)  
**FW:** 847.0  
**Purity:**  $\geq 95\%$  (mixture of congeners)  
**UV/Vis.:**  $\lambda_{max}$ : 263 nm  
**Supplied as:** A crystalline solid  
**Storage:**  $-20^\circ\text{C}$   
**Stability:**  $\geq 2$  years



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

### Laboratory Procedures

TunR1 is supplied as a crystalline solid. A stock solution may be made by dissolving the TunR1 in the solvent of choice, which should be purged with an inert gas. TunR1 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of TunR1 in these solvents is approximately 20 mg/ml.

TunR1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TunR1 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. TunR1 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

TunR1 is an antibiotic and derivative of tunicamycin (Item No. 11445).<sup>1</sup> It is active against *B. subtilis* (MIC = 0.3  $\mu\text{g/ml}$ ) and increases the efficacy of the  $\beta$ -lactam antibiotics oxacillin (Item No. 23954), methicillin (Item No. 21007), and penicillin G (Item No. 21615) against *B. subtilis* when used at a concentration of 0.4  $\mu\text{g/ml}$ . TunR1 (5  $\mu\text{g/ml}$ ) is cytotoxic to MDA-MB-231 breast cancer cells and non-cancerous CHO cells. Unlike tunicamycin, TunR1 does not inhibit glycosylation in a protein N-glycosylation assay.

### Reference

1. Price, N.P., Hartman, T.M., Li, J., *et al.* Modified tunicamycins with reduced eukaryotic toxicity that enhance the antibacterial activity of  $\beta$ -lactams. *J. Antibiot. (Tokyo)* **70(11)**, 1070-1077 (2017).

#### 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.

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