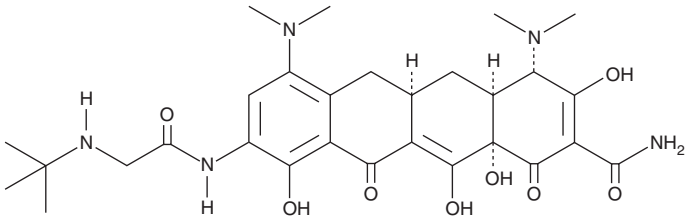
PRODUCT INFORMATION

Tigecycline

Item No. 15026

CAS Registry No.:	220620-09-7
Formal Name:	4S,7-*bis*(dimethylamino)-9-[[2-[(1,1-dimethylethyl)amino]acetyl]amino]-1,4S,4aS,5,5aR,6,11,12a-octahydro-3,10,12,12aS-tetrahydroxy-1,11-dioxo-2-naphthacenecarboxamide
Synonyms:	GAR 936, Glycylcycline
MF:	$C_{29}H_{39}N_5O_8$
FW:	585.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 251, 353 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Tigecycline is supplied as a crystalline solid. A stock solution may be made by dissolving the tigecycline in the solvent of choice, which should be purged with an inert gas. Tigecycline is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of tigecycline in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of tigecycline can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of tigecycline in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Tigecycline is a broad-spectrum glycylcycline antibiotic that binds to the bacterial 30S ribosome, blocking the entry of transfer RNA, which halts protein synthesis and inhibits bacterial growth.[1] It is active against a panel of 1,924 European clinical bacterial isolates including *S. aureus*, *S. epidermidis*, *S. pneumoniae*, *E. faecalis*, *E. faecium*, *E. coli*, *K. pneumoniae*, *P. aeruginosa*, and *P. mirabilis* strains (MICs = <1-32 µg/ml).[2] *In vivo*, tigecycline (6.25 mg/kg twice daily for 5 days) decreases levels of *C. difficile* cytotoxin activity and spore formation in cecum and colon in a mouse model of *C. difficile* infection.[3] Formulations containing tigecycline have been used in the treatment of a variety of bacterial infections.

References

1. Greer, N.D. Tigecycline (Tygacil): The first in the glycylcycline class of antibiotics. *Proc. (Bayl. Univ. Med. Cent.)* **19(2)**, 155-161 (2006).
2. Milatovic, D., Schmitz, F.J., Verhoef, J., *et al.* Activities of the glycylcycline tigecycline (GAR-936) against 1,924 recent European clinical bacterial isolates. *Antimicrob. Agents Chemother.* **47(1)**, 400-404 (2003).
3. Theriot, C.M., Schumacher, C.A., Bassis, C.M., *et al.* Effects of tigecycline and vancomycin administration on established *Clostridium difficile* infection. *Antimicrob. Agents Chemother.* **59(3)**, 1596-1604 (2015).

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