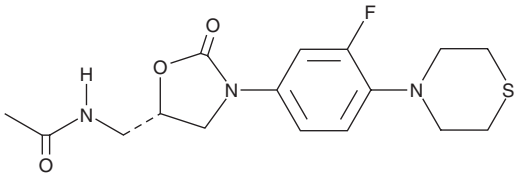
PRODUCT INFORMATION

PNU 100480

Item No. 28395

CAS Registry No.:	168828-58-8
Formal Name:	N-[[(5S)-3-[3-fluoro-4-(4-thiomorpholinyl)phenyl]-2-oxo-5-oxazolidinyl]methyl]-acetamide
Synonyms:	Sutezolid, U 100480
MF:	$C_{16}H_{20}FN_3O_3S$
FW:	353.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 205, 259 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

PNU 100480 is supplied as a crystalline solid. A stock solution may be made by dissolving the PNU 100480 in the solvent of choice, which should be purged with an inert gas. PNU 100480 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PNU 100480 in these solvents is approximately 10 and 3 mg/ml, respectively.

PNU 100480 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PNU 100480 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PNU 100480 has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PNU 100480 is an oxazolidinone antibiotic that is active against multidrug resistant tuberculosis.[1] It inhibits the growth of *M. tuberculosis* replicating and nonreplicating strains (MIC = ~400 ng/ml for both) and of clinical isolates that are susceptible or resistant to a combination of isoniazid (Item No. 20378), rifampin (rifampicin; Item No. 14423), ethambutol (Item No. 23713), and streptomycin (Item No. 21211; MICs = ≤0.0625-0.5 mg/L).[1,2] It also inhibits the growth of *P. insidiosum* and *P. aphanidermatum* clinical isolates (MICs = 4-64 µg/ml).[3] PNU 100480 (100 mg/kg per day) decreases the number of colony forming units (CFU) in the lung in a mouse model of systemic nonreplicating *M. tuberculosis* infection.[2]

References

1. Alffenaar, J.W., van der Laan, T., Simons, S., *et al.* Susceptibility of clinical *Mycobacterium tuberculosis* isolates to a potentially less toxic derivate of linezolid, PNU-100480. *Antimicrob. Agents Chemother.* **55(3)**, 1287-1289 (2011).
2. Zhang, M., Sala, C., Dhar, N., *et al. In vitro* and *in vivo* activities of three oxazolidinones against nonreplicating *Mycobacterium tuberculosis*. *Antimicrob. Agents Chemother.* **58(6)**, 3217-3223 (2014).
3. Loreto, E.S., Tondolo, J.S.M., Oliveira, D.C., *et al. In vitro* activities of miltefosine and antibacterial agents from the macrolide, oxazolidinone, and pleuromutilin classes against *Pythium insidiosum* and *Pythium aphanidermatum*. *Antimicrob. Agents Chemother.* **62(3)**, e01678-17 (2018).

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