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产品名称：MUT056399
产品别名：Fab-001

生物活性：

Description	MUT056399 (Fab-001) is a highly potent inhibitor of the FabI enzyme of both S. aureus and E. coli with 50% inhibitory concentration IC_{50}s of 12 nM and 58 nM, respectively.
IC_{50} & Target	IC50 value: 12 nM (for S. aureus), 58 nM (for E. coli)[1]
In Vitro	MUT056399 (Fab-001) is a highly potent new inhibitor of the FabI enzyme of both Staphylococcus aureus and Escherichia coli. MUT056399 is very active against S. aureus strains, including methicillin-susceptible S. aureus (MSSA), methicillin-resistant S. aureus (MRSA), linezolid-resistant, and multidrug-resistant strains, with MIC90s between 0.03 and 0.12 μg/ml. MUT056399 is also active against coagulase-negative staphylococci, with MIC90s between 0.12 and 4 μg/ml. MUT056399 is very active against the 118 S. aureus strains tested, including MSSA and MRSA isolates and linezolid-resistant and multidrug-resistant strains, with MIC90s between ≤0.03 and 0.12 μg/ml.
In Vivo	MUT056399 (Fab-001), administered subcutaneously, protected mice from a lethal systemic infection induced by MSSA, MRSA, and vancomycin-intermediate S. aureus strains (50% effective doses ranging from 19.3 mg/kg/day to 49.6 mg/kg/day). In the nonneutropenic murine thigh infection model, the same treatment with MUT056399 reduced the bacterial multiplication of MSSA and MRSA in the thighs of immunocompetent mice.
Solvent&Solubility	***In Vitro:*** **DMSO: ≥ 31 mg/mL (105.70 mM)** * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.4098 mL	17.0491 mL	34.0983 mL
5 mM	0.6820 mL	3.4098 mL	6.8197 mL
10 mM	0.3410 mL	1.7049 mL	3.4098 mL

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

References

[1]. Escaich S, et al. The MUT056399 inhibitor of FabI is a new antistaphylococcal compound. Antimicrob Agents Chemother. 2011 Oct;55(10):4692-7.

[2]. Schiebel J, et al. An ordered water channel in Staphylococcus aureus FabI: unraveling the mechanism of substrate recognitionand reduction. Biochemistry. 2015 Mar 17;54(10):1943-55.