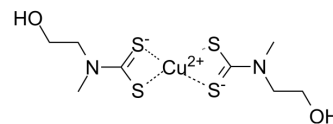


SA09-Cu

Cat. No.:	HY-150260
CAS No.:	155641-16-0
Molecular Formula:	C ₈ H ₁₆ CuN ₂ O ₂ S ₄
Molecular Weight:	364.03
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	SA09-Cu is a noncompetitive and potent NDM-1 inhibitor with an IC ₅₀ of 9.6 nM. SA09-Cu can convert NDM-1 into an inactive state by oxidizing the Zn(II)-thiolate site of the enzyme and avoids to be reduced by intracellular thiols of bacteria. SA09-Cu exhibits excellent inhibition against a series of clinical NDM-1-producing carbapenem-resistant Enterobacteriaceae (CRE) in restoring the Meropenem (HY-13678) effect, and slows down the development of carbapenem resistance ^[1] .
IC₅₀ & Target	IC ₅₀ : 9.6 nM (NDM-1) ^[1]
In Vitro	SA09-Cu (5-160 µg/mL; 24 h) causes the survival rate of Vero E6 and L929 mouse cells higher than 60% with 40 µg/mL ^[1] . SA09-Cu (2, 4, 8, 16 µg/mL; 24 h) shows the obvious inhibition of NDM-1 activity in living cells (E. coli-BL21-NDM-1 and EC23) with concentration gradually increasing ^[1] . SA09-Cu itself demonstrates no or minor antibacterial activity (MIC≥64 µg/mL) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Cheng Chen, et al. Dithiocarbamates combined with copper for revitalizing meropenem efficacy against NDM-1-producing Carbapenem-resistant Enterobacteriaceae. Bioorg Chem. 2022 Jan;118:105474.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA