

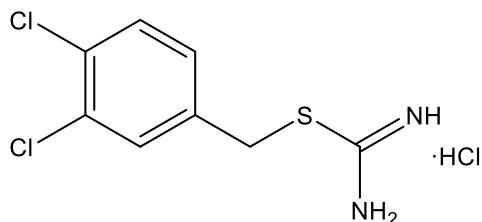
Catalog #10-5275

MreB Inhibitor A22

CAS# 22816-60-0

2-(3,4-Dichloro-benzyl)-isothiourea, hydrochloride; MreB Perturbing Compound A22

Lot # E109463



A22 disrupts the actin cytoskeleton of bacteria causing defects in morphology and chromosome segregation.¹ It is a competitive inhibitor of ATP binding to MreB and has the ability to disassemble the actin cytoskeleton in bacterial cells.¹ It displays antibacterial activity against *P. aeruginosa* (among many others) including multidrug-resistant clinical isolates and points to MreB as a new target for antibacterial development.² A22 significantly disrupts biofilm formation by interfering with the ability of bacterial cells to maintain shape and adherence to surfaces.³

- 1) Bean *et al.* (2009), *A22 disrupts the bacterial actin cytoskeleton by directly binding and inducing a low-affinity state in MreB*; *Biochemistry* **48** 4852
- 2) Bonez *et al.* (2016), *Antibacterial, cyto and genotoxic activities of A22 compound ((S-3, 4 -dichlorobenzyl) isothiourea hydrochloride)*; *Microb. Pathog.* **99** 14
- 3) Dardaei *et al.* (2017), *Anti-biofilm activity of A22 ((S-3,4-dichlorobenzyl) isothiourea hydrochloride) against Pseudomonas aeruginosa: Influence on biofilm formation, motility and bioadhesion*; *Microb. Pathog.* **111** 6

PHYSICAL DATA

Molecular Weight:	271.58
Molecular Formula:	C ₈ H ₈ Cl ₂ N ₂ S·HCl
Purity:	>98% (HPLC)
	NMR: (Conforms)
Solubility:	DMSO (30 mg/mL); Water (6 mg/mL)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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