

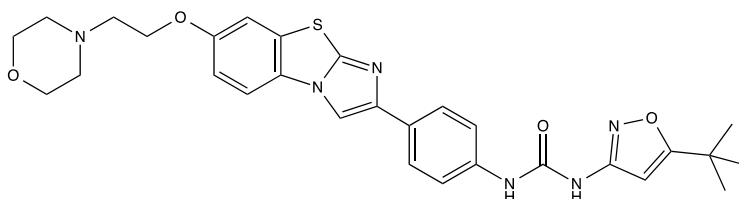
Catalog # 10-4813

Quizartinib

950769-58-1

AC220; 1-(5-(t-Butyl)isoxazol-3-yl)-3-(4-(7-(2-morpholinoethoxy)benzo[d]imidazo[2,1-b]thiazol-2-yl)phenyl)urea

Lot # FBS1092



Quizartinib is a potent and selective inhibitor of FLT3 ($K_d = 1.6\text{nM}$, $IC_{50} = 0.56\text{ nM}$ MV4-11 cells).¹ It is in clinical trials for treatment of Acute Myelogenous Leukemia (AML).^{2,3} Quizartinib priming resulted in prevention of myelosuppression in mice treated with 5-FU and Gemcitabine.⁴ Quizartinib showed significant reversal of ABCG2-mediated multidrug resistance (@ $3\text{ }\mu\text{M}$) via antagonism of drug efflux function.^{5,6}

- 1) Chao *et al.* (2009) *Identification of N-(5-tert-butyl-isoxazol-3-yl)-N'-{4-[7-(2-morpholin-4-yl-ethoxy)imidazo[2,1-b][1,3]benzothiazol-2-yl]phenyl}urea dihydrochloride (AC220), a uniquely potent, selective, and efficacious FMS-like tyrosine kinase-3 (FLT3) inhibitor*; *J.Med.Chem.* **52** 7808
- 2) Zarrinkar *et al.* (2009); *AC220 is a uniquely potent and selective inhibitor of FLT3 for the treatment of acute myeloid leukemia(AML)*; *Blood* **114** 2984
- 3) Fathi and Chen (2017); *The role of FLT3 inhibitors in the treatment of FLT3-mutated acute myeloid leukemia*; *Eur.J.Haematol.* **98** 330
- 4) Taylor and Langdon (2017); *Hitting the snooze button: Inducing quiescence with the FLT3 inhibitor quizartinib protects hematopoietic progenitors from chemotherapy*; *Mol.Cell Oncol.* **4** e1378156
- 5) Li *et al.* (2017); *Quizartinib (AC220) reverses ABCG2-mediated multidrug resistance: In vitro and In vivo studies*; *Oncotarget* **8** 93785
- 6) Bhullar *et al.* (2013) *The FLT3 inhibitor quizartinib inhibits ABCG2 at pharmacologically relevant concentrations, with implications for both chemosensitization and adverse drug reactions*; *PLoS One* **8** e71266

PHYSICAL DATA

Molecular Weight:	560.67
Molecular Formula:	$C_{29}H_{32}N_6O_4S$
Purity:	>98% by HPLC NMR: (Conforms)
Solubility:	DMSO (>25 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 1 month.

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