CTX-0294885 hydrochloride

Cat. No.: HY-15985A

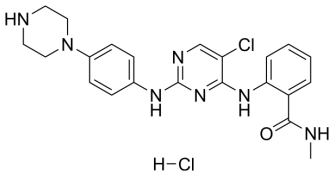
Molecular Formula: $C_{22}H_{25}Cl_2N_7O$

Molecular Weight: 474.39

Target: Akt

Pathway: PI3K/Akt/mTOR

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 55 mg/mL (115.94 mM; Need ultrasonic)
DMSO : 9.17 mg/mL (19.33 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1080 mL	10.5399 mL	21.0797 mL
5 mM	0.4216 mL	2.1080 mL	4.2159 mL
10 mM	0.2108 mL	1.0540 mL	2.1080 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 50 mg/mL (105.40 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 0.92 mg/mL (1.94 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 0.92 mg/mL (1.94 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.92 mg/mL (1.94 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

CTX-0294885 hydrochloride is a broad spectrum kinase inhibitor that can capture 235 kinases from MDA-MB-231 cells, and can capture all members of the AKT family. CTX-0294885 hydrochloride is a powerful reagent for analysis of kinome signaling networks that can be used for the research of diseases like inflammation, diabetes, and cancer[1].

In Vitro

CTX-0294885 hydrochloride is a kinase capture tool in large-scale kinome profiling experiments, with 185 kinases identified as total protein, and 179 identified from TiO_2 enrichment for phosphopeptides in MDA-MB-231 cells (by quantitative MS)[1].

CTX-0294885 hydrochloridecaptures all members of the AKT family that's not identified from previous studies using other kinase capture reagents[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [1]

Reactions contains assay buffer, a Nterminally biotinylated peptide substrate, and ATP at a concentration equaling the K_M of the kinase. The compounds (CTX-0294885) are added in a volume of 100 nL from an 11-point-dilution series prepared in DMSO, positive and negative control reactions receiving the same volume of DMSO without compound. The kinases are added at redetermined concentrations, generally ranging between 0.2 nd 8 nM, with the enzyme being omitted from negative ontrol reactions. The reactions are incubated for 90 min at 0 °C and stopped by adding 5 µL of Stop buffer containing streptavidin-coated donor and antiphosphotyrosine acceptor beads. Plates are incubated for 4-6 h before being read on a plate reader[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Int J Mol Sci. 2021, 22(6), 3063.
- ChemMedChem. 2017 Nov 22;12(22):1857-1865.

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REFERENCES

[1]. Zhang L, et al. Characterization of the novel broad-spectrum kinase inhibitor CTx-0294885 as an affinity reagent for mass spectrometry-based kinome profiling. J Proteome Res. 2013 Jul 5;12(7):3104-16.

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

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