

Product Name: MK 2206 dihydrochloride

Catalog No.: 7850

Batch No.: 1

CAS Number: 1032350-13-2

IUPAC Name: 8-[4-(1-Aminocyclobutyl)phenyl]-9-phenyl-1,2,4-triazolo[3,4-f][1,6]naphthyridin-3(2H)-one dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₅H₂₁N₅O.2HCl.¼H₂O

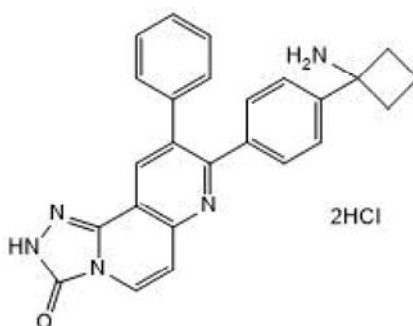
Batch Molecular Weight: 484.89

Physical Appearance: Yellow solid

Solubility: DMSO to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	61.93	4.89	14.44	14.62
Found	61.64	4.85	14	13.82

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956

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Description:

MK 2206 dihydrochloride is a potent and selective allosteric Akt inhibitor (IC₅₀ values are 5 nM, 12 nM, and 65 nM for Akt1, Akt2, and Akt3, respectively). MK 2206 requires the Pleckstrin homology domain for its activity, and exhibits no inhibitory activity in a panel of 250 tested protein kinases. MK 2206 induces growth inhibition of different cancer cell lines (IC₅₀ in the range 3.4 and 28.6 μmol/L) and enhances antitumor efficacy of a range of standard chemotherapeutics. It synergistically inhibits cell proliferation of human lung and breast cancer cells in combination with Erlotinib (Cat. No. 7194) by suppressing both the Ras/Erk and... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

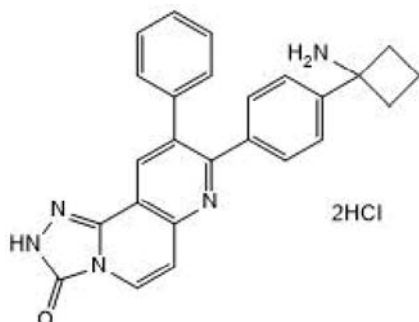
Batch Molecular Formula: C₂₅H₂₁N₅O.2HCl.¼H₂O

Batch Molecular Weight: 484.89

Physical Appearance: Yellow solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

He *et al* (2022) Optimized human intestinal organoid model reveals interleukin-22-dependency of paneth cell formation. *Cell Stem Cell* **29** 1333. PMID: 36002022.

Hirai *et al* (2010) MK-2206, an allosteric Akt Inhibitor, enhances antitumor efficacy by standard chemotherapeutic agents or molecular targeted drugs *in vitro* and *in vivo*. *Mol.Cancer Ther.* **9** 1956. PMID: 20571069.

Li *et al* (2009) Abstract #DDT01-1: MK-2206: A potent oral allosteric AKT inhibitor. *AACR Annual Meeting* **69** (9).

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 50 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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