

Certificate of Analysis

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Product Name: CX-4945

Catalog No.: 8993

Batch No.: 1

CAS Number: 1309357-15-0

IUPAC Name: Sodium 5-[(3-Chlorophenyl)amino]benzo[c]-2,6-naphthyridine-8-carboxylate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₉H₁₁ClN₃O₂Na.2H₂O

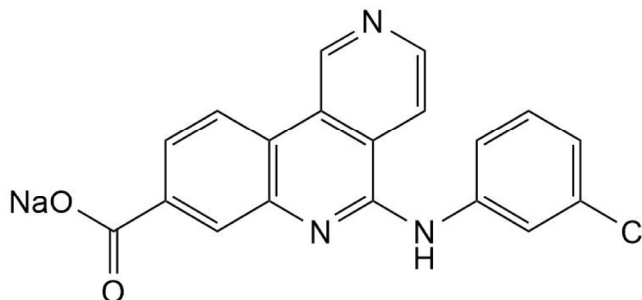
Batch Molecular Weight: 407.79

Physical Appearance: Pale yellow solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	55.96	3.71	10.3
Found	55.25	3.49	9.98

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

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Description:

CX-4945 (Silmittasertib) is a potent and selective inhibitor of protein kinase CK2 α and CK2 α' (IC₅₀ = 1 nM). It shows greater than 500-fold selectivity for CK2 over a panel of > 200 kinases. CX-4945 can be used, in combination with other small molecules, in fast chemical reprogramming protocols for the induction of human somatic cells and highly efficient generation of pluripotent stem cells (hCiPS) in a minimum of 16 days with robust repeatability and reliability. CX-4945 has antiproliferative effects in vitro as it attenuates PI3K/Akt signalling, causes cell-cycle arrest and selectively induces apoptosis in cancer cells. In ... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

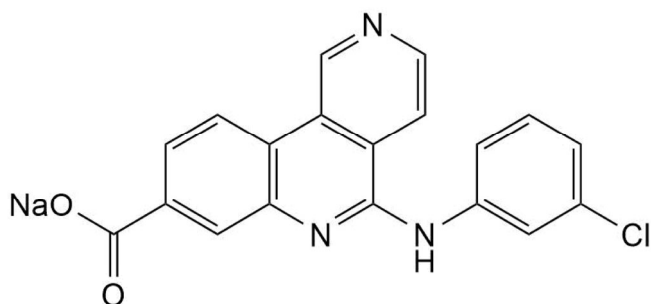
Batch Molecular Formula: C₁₉H₁₁ClN₃O₂Na.2H₂O

Batch Molecular Weight: 407.79

Physical Appearance: Pale yellow solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Wang *et al* (2025) A rapid chemical reprogramming system to generate human pluripotent stem cells. *Nat.Chem.Biol.* **21** 1030. PMID: 39753706.

Liuyang *et al* (2023) Highly efficient and rapid generation of human pluripotent stem cells by chemical reprogramming. *Cell Stem Cell* **30** 450. PMID: 36944335.

Siddiqui-Jain *et al* (2010) CX-4945, an orally bioavailable selective inhibitor of protein kinase CK2, inhibits prosurvival and angiogenic signaling and exhibits antitumor efficacy. *Cancer Res.* **70** 10288. PMID: 21159648.

Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 100 mM

DMSO to 100 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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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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