



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

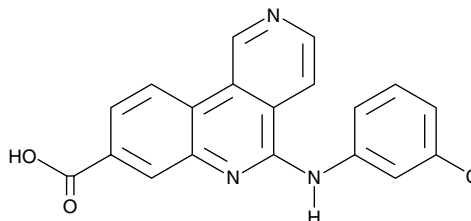
Product Information



CX-4945

Item No. 16779

CAS Registry No.: 1009820-21-6
Formal Name: 5-[(3-chlorophenyl)amino]-benzo[c]-
2,6-naphthyridine-8-carboxylic acid
Synonym: Silmitasertib
MF: C₁₉H₁₂ClN₃O₂
FW: 349.8
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 209, 240, 260, 360 nm



Laboratory Procedures

For long term storage, we suggest that CX-4945 be stored as supplied at -20°C. It should be stable for at least two years.

CX-4945 is supplied as a crystalline solid. A stock solution may be made by dissolving the CX-4945 in the solvent of choice. CX-4945 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of CX-4945 in these solvents is approximately 15 and 20 mg/ml, respectively.

CX-4945 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CX-4945 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. CX-4945 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

CX-4945 is a potent, orally bioavailable inhibitor of casein kinase 2 (CK2; K_i = 0.38 nM) that competes with ATP by filling the small ATP binding site on the catalytic CK2α subunit, conferring selectivity.¹⁻³ It inhibits proliferation in a panel of cancer cell lines that overexpress CK2 and prevents tumor growth of breast and pancreatic cancer cell xenografts in mice.³ CX-4945 blocks survival and induces apoptosis in cancer stem cells and is effective against glioblastomas and acute myeloid leukemia cells.^{4,5} CX-4945 also inhibits Cdc2-like kinases (Clk; IC₅₀s = 82.3, 3.8, and 90 nM for Clk1, Clk2, and Clk3, respectively), interfering with alternative splicing.⁶

References

1. Pierre, F., Chua, P.C., O'Brien, S.E., *et al.* Discovery and SAR of 5-(3-chlorophenylamino)benzo[c][2,6]naphthyridine-8-carboxylic acid (CX-4945), the first clinical stage inhibitor of protein kinase CK2 for the treatment of cancer. *J. Med. Chem.* **54**(2), 635-654 (2011).
2. Ferguson, A.D., Sheth, P.R., Basso, A.D., *et al.* Structural basis of CX-4945 binding to human protein kinase CK2. *FEBS Lett.* **585**(1), 104-110 (2011).
3. Siddiqui-Jain, A., Drygin, D., Streiner, N., *et al.* CX-4945, an orally bioavailable selective inhibitor of protein kinase CK2, inhibits prosurvival and angiogenic signaling and exhibits antitumor efficacy. *Cancer Res.* **70**(24), 10288-10298 (2010).
4. Agarwal, M., Nitta, R.T., and Li, G. Casein Kinase 2: A novel player in glioblastoma therapy and cancer stem cells. *J. Mol. Genet. Med.* **8**(1), 1-18 (2013).
5. Quotti Tubi, L., Gurrieri, C., Brancalion, A., *et al.* Inhibition of protein kinase CK2 with the clinical-grade small ATP-competitive compound CX-4945 or by RNA interference unveils its role in acute myeloid leukemia cell survival, p53-dependent apoptosis and daunorubicin-induced cytotoxicity. *J. Hematol. Oncol.* **6**, 1-15 (2013).
6. Kim, H., Choi, K., Kang, H., *et al.* Identification of a novel function of CX-4945 as a splicing regulator. *PLoS One* **9**(4), e94978 (2014).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/16779

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's exclusive remedy and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Copyright Cayman Chemical Company, 11/05/2014

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com