Print Date: May 1st 2019

Certificate of Analysis

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Product Name: **SBE 13 hydrochloride** **Catalog No.: 4292** **Batch No.: 1**

CAS Number: 1052532-15-6

IUPAC Name: *N*-[[4-[(6-Chloro-3-pyridinyl)methoxy]-3-methoxyphenyl]methyl]-3,4-dimethoxybenzeneethanamine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{24}H_{27}ClN_2O_4.HCl$

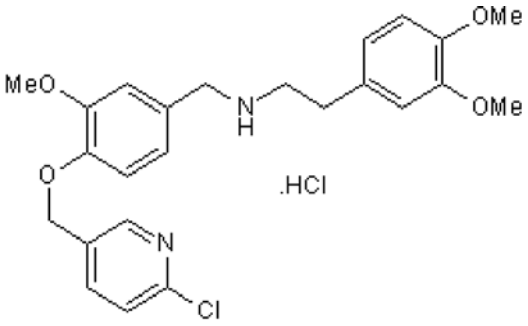
Batch Molecular Weight: 479.4

Physical Appearance: White solid

Solubility: water to 10 mM with gentle warming
DMSO to 100 mM
ethanol to 10 mM with gentle warming

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	60.13	5.89	5.84	14.79
Found	60.13	5.96	5.89	14.89

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Description:

Selective inhibitor of PLK1 (IC_{50} values are 200 pM, 875 nM and 66 µM for PLK1, PLK3 and PLK2 respectively). Exhibits no effect on Aurora kinase A activity. Binds and stabilizes the inactive form of PLK1. Delays cell cycle progression, reduces cell proliferation and induces apoptosis in a range of human cancer cell lines. Transiently arrests cells cycle at G_0/G_1 in primary cells.

Physical and Chemical Properties:

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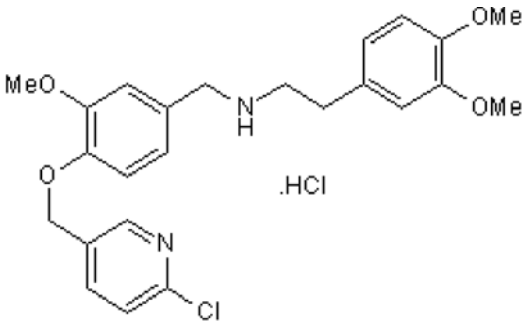
Batch Molecular Weight: 479.4

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 10 mM with gentle warming
DMSO to 100 mM
ethanol to 10 mM with gentle warming

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.

Other Information:

INFORMATION FOR CUSTOMERS IN THE UK ONLY

This product is a Schedule 1 Home Office controlled substance and customers in the UK are required to hold the relevent licence or be exempt from restrictions in order to purchase and posess this material.

References:

Keppner *et al* (2011) Fate of primary cells at the G_1/S boundary after Polo-like kinase 1 inhibition by SBE13. Cell Cycle ***10*** 708. PMID: 21301227.

Eckerdt (2010) Freezing Polo in its sleep: targeting the inactive conformation of Polo-like kinase 1 in cancer cells. Cell Cycle ***9*** (5) 862. PMID: 20348843.

Keppner *et al* (2010) Biological impact of freezing Plk1 in its inactive conformation in cancer cells. Cell Cycle ***9*** 761. PMID: 20139717.

Liu (2010) SBE13 joins the family of Polo-like kinase 1 (Plk1) inhibitors. Cell Cycle ***9*** 445. PMID: 20130451.

Keppner *et al* (2009) Identification and validation of a potent type II inhibitor of inactive polo-like kinase 1. ChemMedChem ***4*** 1806. PMID: 19746360.