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TOCRIS

Print Date: May 15th 2025

Certificate of Analysis

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Product Name: **SB 743921 hydrochloride** **Catalog No.: 5109** **Batch No.: 2**

CAS Number: 940929-33-9

IUPAC Name: *N*-(3-Aminopropyl)-*N*-[(1*R*)-1-[7-chloro-4-oxo-3-(phenylmethyl)-4*H*-1-benzopyran-2-yl]-2-methylpropyl]-4-methylbenzamide hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{31}H_{33}ClN_2O_3.HCl.¼H_2O$

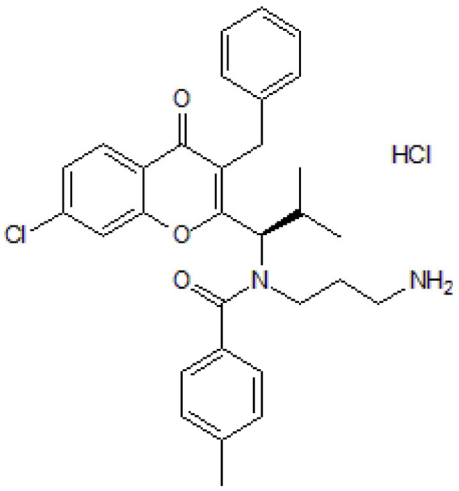
Batch Molecular Weight: 558.02

Physical Appearance: Off White solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.6% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = +174 (Concentration = 1, Solvent = Methanol)

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	66.72	6.23	5.02	12.71
Found	65.66	6.12	4.87	12.75

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Description:

SB 743921 hydrochloride is a potent kinesin spindle protein (KSP) inhibitor (K_i = 0.1 nM). Induces cell mitotic arrest and apoptosis in vitro. Inhibits the growth of a range of tumor cells in vitro, including colon (HCT 116), prostate (PC-3) and leukemia (K-562) cancer cell lines. Causes tumor regression in human tumor xenograft models in vivo, including colon (Colo205), lung (H69) and breast (MCF7) cancer cell xenografts.

Physical and Chemical Properties:

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Minimum Purity: ≥98%

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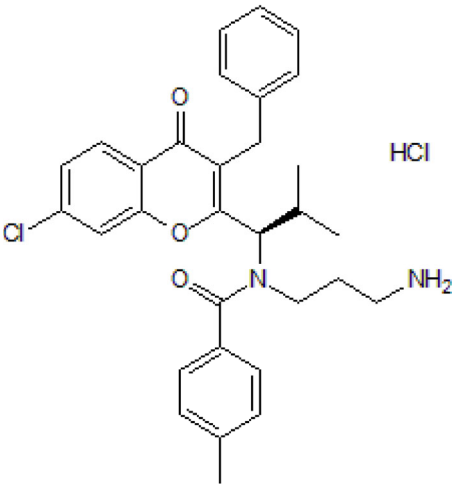

Storage: Store at -20°C

Solubility & Usage Info:

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.

Licensing Information:

Sold with the permission of GlaxoSmithKline.

References:

Good *et al* (2013) Optimized *S*-trityl-$_L$-cysteine-based inhibitors of kinesin spindle protein with potent in vivo antitumor activity in lung cancer xenograft models. J.Med.Chem. ***56*** 1878. PMID: 23394180.

Talapatra *et al* (2013) Mitotic kinesin Eg5 overcomes inhibition to the phase I/II clinical candidate SB743921 by an allosteric resistance mechanism. J.Med.Chem. ***56*** 6317. PMID: 23875972.

Jackson *et al* (2006) A second generation KSP inhibitor, SB-743921, is a highly potent and active therapeutic in preclinical models of cancer. First AACR International Conference on Molecular and Diagnostics in Cancer Therapeutic Development. Abstract (B11).

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