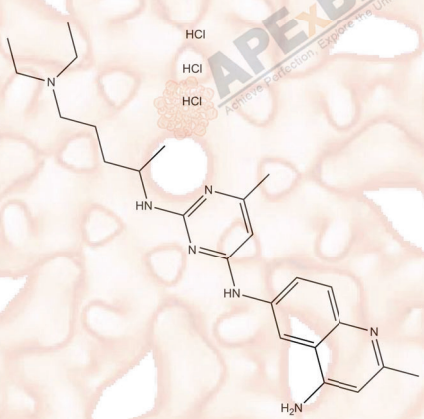
Product Data Sheet

NSC23766 trihydrochloride

Cat. No.:	A1952
CAS No.:	1177865-17-6
Formula:	C24H35N7·3HCl
M.Wt:	530.96
Synonyms:	
Target:	Cell Cycle/Checkpoint
Pathway:	Rho
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

≥26.55mg/mL in DMSO

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1mg	5mg	10mg
1 mM	1.8834 mL	9.4169 mL	18.8338 mL
5 mM	0.3767 mL	1.8834 mL	3.7668 mL
10 mM	0.1883 mL	0.9417 mL	1.8834 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Selective inhibitor of Rac1-GEF interaction.
IC_{50} & Target	50 μM (Rac GTPase)

In Vitro

Cell Viability Assay

Cell Line:	Human breast cancer cell lines MDA-MB-231 and MDA-MB-468 as well as the MCF12A normal mammary epithelial cell line
Preparation method:	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

	Reacting conditions:	0 ~ 100 μM; 2 d
	Applications:	NSC 23766 inhibited cell growth and induced apoptosis. NSC 23766 dose-dependently decreased the viability of MDA-MB-468 and MDA-MB-231 cells, with IC50 of ~ 10 μM, but had little effect on the survival of the MCF12A normal mammary epithelial cells. After 24-h exposure to NSC 23766, MDA-MB-231 cells exhibited an increase from 41% to 65% in G1 phase and a concomitant decrease in S and G2-M phases. 100 μM NSC 23766 induced a six-fold increase of apoptotic MDA-MB-468.
In Vivo	**Animal experiment**	
	Animal models:	C57BL/6 mice
	Dosage form:	2.5 mg/kg; i.p.
	Applications:	In the ‘‘poorly mobilizing’’ C57BL/6 mice, intraperitoneal administration of NSC 23766 (2.5 mg/kg) induced a two-fold increase in circulating hematopoietic stem cells/progenitors 6 hr after injection.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Gao Y1, Dickerson JB, Guo F, Zheng J, Zheng Y. Rational design and characterization of a Rac GTPase-specific small molecule inhibitor. Proc Natl Acad Sci U S A. 2004 May 18;101(20):7618-23.

[2]. Yoshida T, Zhang Y, Rivera Rosado LA, Chen J, Khan T, Moon SY, Zhang B. Blockade of Rac1 activity induces G1 cell cycle arrest or apoptosis in breast cancer cells through downregulation of cyclin D1, survivin, and X-linked inhibitor of apoptosis protein. Mol Cancer Ther. 2010 Jun;9(6):1657-68.

[3]. Akbar H1, Cancelas J, Williams DA, Zheng J, Zheng Y. Rational design and applications of a Rac GTPase-specific small molecule inhibitor. Methods Enzymol. 2006;406:554-65.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for

long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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