

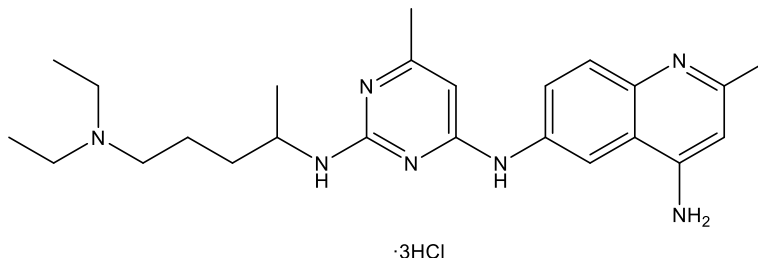
Catalog # 10-2731

NSC23766

CAS 733767-34-5

N⁶-[2-[[4-(Diethylamino)-1-methylbutyl]amino]-6-methyl-4-pyrimidinyl]-2-methyl-4,6-quinolinediamine trihydrochloride

Lot # X105605



NSC23766 is a selective inhibitor of Rac1-GEF interaction. Prevents Rac1 activation by Rac-specific guanine nucleotide exchange factors (GEFs) Trio and Tiam1 (IC₅₀ ca. 50 μM) with no effect on the closely related Cdc42 or RhoA. In cells, it blocks serum or PDGF-induced Rac-1 activation and lamellipodia formation. NSC23766 suppressed the growth of wild-type NIH 3T3 cells but was inactive in cells expressing the constitutively active Rac1 mutant, L61Rac1.¹ It is a useful tool to probe the involvement of Rac1 in cell signalling.² Off target effect: antagonist at muscarinic acetylcholine receptors.³ Cell permeable.

- 1) Gao *et al.* (2004), *Rational design and characterization of a Rac GTPase-specific small molecule inhibitor*; Proc. Natl. Acad. Sci. USA, **101** 7618
- 2) Shankar *et al.* (2013), *Raft endocytosis of AMF regulates mitochondrial dynamics through Rac1 signaling and the Gp78 ubiquitin ligase*; J. Cell Sci., **126** 3295
- 3) Levay *et al.* (2013), *NSC23766, a widely used inhibitor of Rac1 activation, additionally acts as a competitive antagonist at muscarinic acetylcholine receptors*; J. Pharmacol. Exp. Ther., **347** 69

PHYSICAL DATA

Molecular Weight:	530.98
Molecular Formula:	C ₂₄ H ₃₅ N ₇ ·3HCl
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 50 mg/ml) or Water (up to 50 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied at room temperature for up to 1 year from the date of purchase. Solutions in DMSO or distilled water may be stored at -20°C for up to 3 months.

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