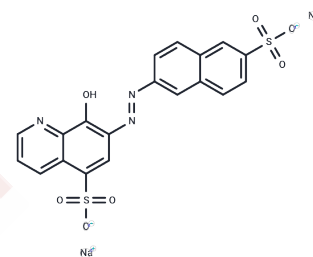


NSC-87877 disodium

Chemical Properties

CAS No. :	56932-43-5
Formula:	C ₁₉ H ₁₃ N ₃ O ₇ S ₂ ·2Na
Molecular Weight:	503.42
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	NSC-87877 disodium (NSC87877) is a cell-permeable inhibitor of both SHP-1 and SHP-2 with IC ₅₀ values of 355 and 318 nM respectively. It also inhibits EGF-induced Erk1/2 activation in HEK293 cells and significantly reduces MDA-MB-468 cell viability/proliferation.
Targets(IC ₅₀)	Apoptosis, Phosphatase
In vitro	NSC-87877 seems to have no selectivity between human Shp2 and Shp1 in vitro. NSC-87877 inhibits EGF-stimulated Shp2 activation and EGF-induced Erk1/2 activation. NSC-87877 suppresses Erk1/2 activation by a Gab1-Shp2 chimera but does not affect PMA (phorbol 12-myristate 13-acetate)-induced Erk1/2 Activation. NSC-87877 does not inhibit EGF-induced Gab1 tyrosine phosphorylation and Gab1-Shp2 association. NSC-87877 can significantly reduce MDA-MB-468 cell viability/proliferation, especially in combination with a phosphoinositide 3-kinase inhibitor[1].
In vivo	NSC-87877 almost completely prevented EAE(experimental autoimmune encephalomyelitis) development by blocking the accumulation of inflammatory cells in the CNS(central nervous system)[2]. In an intrarenal mouse model of neuroblastoma, NSC-87877 treatment results in decreased tumor growth and increased p53 and p38 activity[3]. Intrathecal administration of NSC-87877 (an SHP2 antagonist; 1, 10, or 100 μM/rat) into the allodynic rats suppresses spinal nerve ligation-induced allodynia, spinal SHP2 and NR2B phosphorylation, and SHP2/phosphorylated SHP2-PSD-95 and PSD-95-NR2B/phosphorylated NR2B coprecipitation[4].
Cell Research	Serum-starved cells are pretreated with NSC-87877 (50 μM, 3 h) or dimethyl sulfoxide (solvent) and then stimulated with EGF (100 ng/ml, 5 min) or left untreated. Cells are lysed in ice-cold PTP(protein tyrosine phosphatase) lysis buffer. Shp2 or Shp1 in cell lysate supernatants (0.5 mg/each) is immunoprecipitated with an antibody to Shp2 or an antibody to Shp1 plus protein A-Sepharose for 2 h at 4°C. (Only for Reference)

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 93 mg/mL (184.74 mM), Sonication is recommended. H ₂ O: 92 mg/mL (182.75 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9864 mL	9.9321 mL	19.8641 mL
5 mM	0.3973 mL	1.9864 mL	3.9728 mL
10 mM	0.1986 mL	0.9932 mL	1.9864 mL
50 mM	0.0397 mL	0.1986 mL	0.3973 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Chen L, et al. Mol Pharmacol. 2006, 70(2):562-70.

Luo Q, et al. Br J Pharmacol. 2014, 171(7):1706-21.

Shi Y, et al. Cell Death Dis. 2015, 6:e1841.

Peng HY, et al. Pain. 2012, 153(5):1042-53.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481