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Produktinformation

- Forschungsprodukte & Biochemikalien
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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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NSC-87877 disodium

Cat. No.: HY-18756A

CAS No.: 56932-43-5

Molecular Formula: $C_{19}H_{11}N_3Na_2O_7S_2$

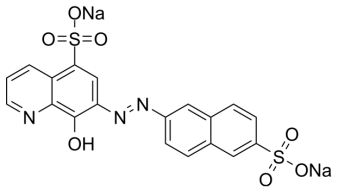
Molecular Weight: 503.42

Target: Phosphatase; Apoptosis; SHP2

Pathway: Metabolic Enzyme/Protease; Apoptosis; Protein Tyrosine Kinase/RTK

Storage: -20°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (248.30 mM; Need ultrasonic)

H_2O : 50 mg/mL (99.32 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
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

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

BIOLOGICAL ACTIVITY

Description

NSC-87877 disodium is a potent inhibitor of Shp2 and Shp1 protein tyrosine phosphatases (SH-PTP2 and SH-PTP1), with IC_{50} values of 0.318 μM, 0.355 μM shp2 and shp1, respectively[1]. NSC-87877 also inhibits dual-specificity phosphatase 26 (DUSP26)[2].

IC_{50} & Target

IC50: 0.318 μM (shp2), 0.355 μM (shp1)[1].

In Vitro

NSC-87877 (0-0.5 μM, 5 days) inhibits DUSP26 function in NB cell lines[3].

NSC-87877 (0-0.5 μM, 5 days) results in increased p53 phosphorylation (Ser37 and Ser46) and activation[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[2]

Cell Line:	p53 wild-type neuroblastoma (NB) cell lines.
Concentration:	0, 0.25, 0.5 μM.
Incubation Time:	5 days.

Result:	Resulted in increased p53 phosphorylation (Ser37 and Ser46) and activation, increased activation of downstream p38 effector proteins (heat shock protein 27 (HSP27) and MAP kinase-activated protein kinase 2 (MAPKAPK2)) and poly ADP ribose polymerase/caspase-3 cleavage. Inhibited DUSP26 function in NB cell lines. Resulted in apoptosis in many cell lines at varying IC_{50} levels of 1.84 μM (IMR32), 6.35 μM (SK-N-SH), 8.69 μM (NB-19), 12.6 μM (SMS-KCN), 15.7 μM (SH-SY5Y), 15.8 μM (JF) and 19.0 μM (CHLA-225), respectively.

In Vivo

NSC-87877 (30 mg/kg, IP once daily for 15 days) possesses excellent anti- neuroblastoma activity[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Intrarenal neuroblastoma (NB) tumor mouse model in female nude mice[3].
Dosage:	30 mg/kg.
Administration:	IP once daily for 15 days.
Result:	Significantly inhibited NB tumor growth.

REFERENCES

[1]. Chen L, et al. Discovery of a novel shp2 protein tyrosine phosphatase inhibitor. Mol Pharmacol. 2006 Aug;70(2):562-70.

[2]. Song M, et al. NSC-87877, inhibitor of SHP-1/2 PTPs, inhibits dual-specificity phosphatase 26 (DUSP26). Biochem Biophys Res Commun. 2009 Apr 17;381(4):491-5.

[3]. Y Shi, et al. NSC-87877 inhibits DUSP26 function in neuroblastoma resulting in p53-mediated apoptosis. Cell Death Dis. 2015 Aug 6;6(8):e1841.

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