Ned 19

Cat. No.: HY-103316A

CAS No.: 874374-25-1

Molecular Formula: $C_{30}H_{31}FN_4O_3$

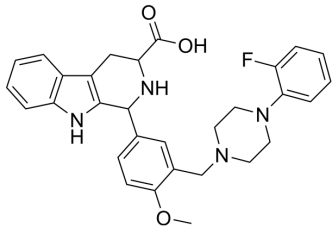
Molecular Weight: 514.59

Target: Calcium Channel

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (242.91 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9433 mL	9.7165 mL	19.4329 mL
	5 mM	0.3887 mL	1.9433 mL	3.8866 mL
	10 mM	0.1943 mL	0.9716 mL	1.9433 mL

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

BIOLOGICAL ACTIVITY

Description

Ned 19 is a selective membrane-permeant non competitive NAADP antagonist and inhibits NAADP-mediated Ca^{2+} signaling, with an IC_{50} of 65 nM[1]. Ned 19 strongly inhibits tumor growth and vascularization as well as lung metastases in mice[2].

IC_{50} & Target

NAADP, Ca_{2+}[1]

In Vitro

Ned 19 (25-100 μM; 24-72 hours) reduces cell proliferation[2].
Ned 19 (25-100 μM; 24-72 hours) reduces markedly the cell number[2].
Ned 19 (25-100 μM; 24-72 hours) reduces the S phase percentage and increases of the G0/G1 phase percentage evaluated by cell cycle analysis[2].
Ned 19 (25-100 μM; 24-72 hours) induces cell apoptosis a time-dependent manner[2].
Ned 19 (25-100 μM; 24-72 hours) reduces expression of N-cadherin and increases expression of E-cadherin, affecting the cell migratory behavior[2].

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

Cell Proliferation Assay[2]

Cell Line:	B16 cells
Concentration:	25, 50, 100 μM
Incubation Time:	24, 48, 72 hours
Result:	Reduced cell proliferation.

Cell Viability Assay[2]

Cell Line:	B16 cells
Concentration:	25, 50, 100 μM
Incubation Time:	24, 48, 72 hours
Result:	Reduced markedly the cell number.

Cell Cycle Analysis[2]

Cell Line:	B16 cells
Concentration:	25, 50, 100 μM
Incubation Time:	24, 48, 72 hours
Result:	Reduced the S phase percentage and increased of the G0/G1 phase percentage.

Apoptosis Analysis[2]

Cell Line:	B16 cells
Concentration:	25, 50, 100 μM
Incubation Time:	24, 48, 72 hours
Result:	Induced cell apoptosis a time-dependent manner.

Western Blot Analysis[2]

Cell Line:	B16 cells
Concentration:	25, 50, 100 μM
Incubation Time:	24, 48, 72 hours
Result:	Reduced expression of N-cadherin and increased expression of E-cadherin.

In Vivo

Ned 19 (i.p.; 5 mg/Kg/every second day; 4 week) impaires severely tumor growth[2].

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

Animal Model:	Adult male C57BL/6 mice[2]
Dosage:	5 mg/Kg
Administration:	I.p.; every second day; 4 week
Result:	Impaired severely tumor growth.

CUSTOMER VALIDATION

- Nat Commun. 2023 Jan 14;14(1):226.
- Cell Rep. 2023 Dec 26;42(12):113573.

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REFERENCES

[1]. Rosen D, et al. Analogues of the nicotinic acid adenine dinucleotide phosphate (NAADP) antagonistNed-19 indicate two binding sites on the NAADP receptor. J Biol Chem. 2009 Dec 11;284(50):34930-4.

[2]. Annarita Favia, et al. NAADP-Dependent Ca2+ Signaling Controls Melanoma Progression, Metastatic Dissemination and Neoangiogenesis. Sci Rep. 2016; 6: 18925.

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