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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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N-Methylmesoporphyrin IX

Cat. No.: HY-133821

CAS No.: 142234-85-3

Molecular Formula: $C_{35}H_{40}N_4O_4$

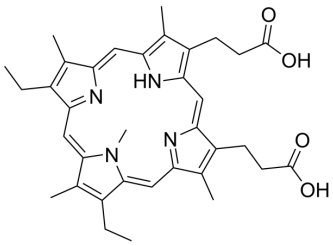
Molecular Weight: 580.72

Target: G-quadruplex

Pathway: Cell Cycle/DNA Damage

Storage: -20°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (43.05 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7220 mL	8.6100 mL	17.2200 mL
	5 mM	0.3444 mL	1.7220 mL	3.4440 mL
	10 mM	0.1722 mL	0.8610 mL	1.7220 mL

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

BIOLOGICAL ACTIVITY

Description

N-Methylmesoporphyrin IX (NMM), a widely used G-quadruplex DNA specific fluorescent binder, is an efficient probe for monitoring Aβ fibrillation. N-Methylmesoporphyrin IX is an in situ inhibitor and an ex situ monitor for Aβ amyloidogenesis both in vitro and in cells. N-Methylmesoporphyrin IX is sensitive to G-quadruplexes DNA but has no response to duplexes, triplexes and single-stranded forms DNA. N-Methylmesoporphyrin IX is nonfluorescent alone or in monomeric Aβ environments, but emits strong fluorescence through stacking with the Aβ assemblies[1].

In Vitro

By use of N-Methylmesoporphyrin IX (NMM) as an ex situ probe, NMM is added into the incubated Aβ40 solution. The concentration of NMM is fixed at 1μM. To examine the influence of Rhodamine B, 1 μM NMM with 0.1 μM or 0.5 μM Rhodamine B along with 10μM Aβ40 are measured. In the study of using NMM as an in situ inhibitor, NMM (10 μM) is co-incubated with Aβ40 (50 μM) for 7 days at 37 °C. Additional NMM is added before PL measurement to make the concentration of NMM constant (1 μM). The fluorescence spectra of NMM are collected from 550 to 700 nm with an excitation wavelength of 399 nm[1].

N-Methylmesoporphyrin IX (NMM) is sensitive to G-quadruplexes DNA but has no response to duplexes, triplexes and single-stranded forms DNA. Upon binding to quadruplex DNA, for efficient π-π stacking, NMM can adjust its macrocycle geometry to match the terminal face of a G-quadruplex, leading to an enhancement in its fluorescence[1].

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

REFERENCES

[1]. Meng Li, et al. N-Methyl Mesoporphyrin IX as an Effective Probe for Monitoring Alzheimer's Disease β-Amyloid Aggregation in Living Cells. ACS Chem Neurosci. 2017 Jun 21;8(6):1299-1304.

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