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Produktinformation

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

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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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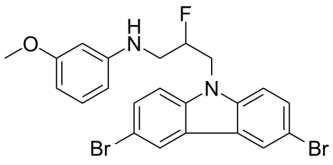
P7C3-A20

Cat. No.:	HY-15978
CAS No.:	1235481-90-9
Molecular Formula:	$C_{22}H_{19}Br_2FN_2O$
Molecular Weight:	506.21
Target:	Others
Pathway:	Others

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (197.55 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.9755 mL	9.8773 mL	19.7546 mL
5 mM	0.3951 mL	1.9755 mL	3.9509 mL
10 mM	0.1975 mL	0.9877 mL	1.9755 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 3.85 mg/mL (7.61 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.94 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

P7C3-A20 is a derivative of P7C3 with potent proneurogenic and neuroprotective activity. P7C3-A20 exerts an antidepressant-like effect. P7C3-A20 can cross the blood-brain barrier and therefore has the potential for brain injury treatment[1][2][3].

In Vitro

P7C3-A20 (10-100 μM; 8 hours; PC12 cells) treatment alleviates oxygen-glucose deprivation (OGD)-induced cytotoxicity in PC12 cells[1].

P7C3-A20 (40-100 μM; 8 hours; PC12 cells) treatment alleviates OGD-induced apoptosis in PC12 cells[1].

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

Cell Viability Assay[1]

Cell Line:	PC12 cells
Concentration:	10 μM, 20 μM, 40 μM, 60 μM, 80 μM, 100 μM
Incubation Time:	8 hours
Result:	Alleviated oxygen-glucose deprivation (OGD)-induced cytotoxicity in PC12 cells.

Apoptosis Analysis[1]

Cell Line:	PC12 cells
Concentration:	40 μM, 60 μM, 80 μM, 100 μM
Incubation Time:	8 hours
Result:	Alleviated oxygen-glucose deprivation (OGD)-induced apoptosis in PC12 cells.

In Vivo

P7C3-A20 (5-10 mg/kg; intraperitoneal injection; daily; for 7 days; Sprague-Dawley rats) treatment reduces infarct volume; reverses cell loss in the cortex and hippocampus and improves motor function without causing neurotoxicity in HI model rats. P7C3-A20 prevents HI-induced neuronal injury via activation of the PI3K/AKT/GSK3β signaling pathway[1].

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

Animal Model:	Sprague-Dawley rats (200-250 g) induced hypoxic-ischemic (HI) injury [1]
Dosage:	5 mg/kg, 10 mg/kg
Administration:	Intraperitoneal injection; daily; for 7 days
Result:	Reduced infarct volume; reversed cell loss in the cortex and hippocampus and improved motor function without causing neurotoxicity.

CUSTOMER VALIDATION

- Circ Res. 2021 May 28;128(11):1629-1641.
- Int J Mol Sci. 2023, 24(4), 3846.
- Neuroscience. 2020 Aug 10;441:197-208.
- Oxid Med Cell Longev. 2023 Feb 8;2023:7857760.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Blaya MO et al. Neuroprotective efficacy of a proneurogenic compound after traumatic brain injury. J Neurotrauma. 2014 Mar 1;31(5):476-86.

[2]. Walker AK et al. The P7C3 class of neuroprotective compounds exerts antidepressant efficacy in mice by increasinghippocampal neurogenesis. Mol Psychiatry. 2015 Apr;20(4):500-8.

[3]. Junjie Bai, et al. The Small Molecule P7C3-A20 Exerts Neuroprotective Effects in a Hypoxic-Ischemic Encephalopathy Model via Activation of PI3K/AKT/GSK3β Signaling. Neuroscience. 2020 Jun 3;S0306-4522(20)30353-5.

Caution: Product has not been fully validated for medical applications. For research use only.

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