SZABO SCANDIC

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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- 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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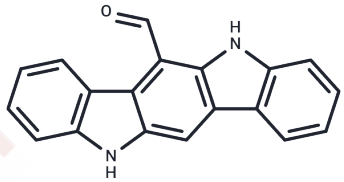
Data Sheet (Cat.No.TQ0257)

TargetMol

FICZ

Chemical Properties



CAS No. : 172922-91-7

Formula: C19H12N2O

Molecular Weight: 284.31

Appearance: no data available

Storage: keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	FICZ (6-Formylindolo[3,2-b]carbazole) is a potent aryl agonist for the hydrocarbon receptor (AhR, Kd: 70 pM).
Targets(IC50)	Aryl Hydrocarbon Receptor
In vitro	FICZ (0.01 nM-1 μM) alone or in combination with 50 nM MNF induces sustained CYP1A1 activity and leads to oxidative stress and activation of apoptosis via a mitochondrial-dependent pathway. In HepG2 cells, FICZ stimulates cell growth at low concentrations but inhibits cell growth at high concentrations [1]. FICZ (10-30 μM) significantly decreases CEH viability with an estimated LC50 (95% confidence intervals) of 14 μM. FICZ shows concentration-dependent effects on EROD activity in CEH cultures, with the mean EC50 values at 3, 8, and 24 h of 0.016 nM, 0.80 nM, and 11 nM, respectively [2]. CYP1 inhibition in the presence of FICZ results in enhanced AHR activation, suggesting that FICZ accumulates in the cell when its metabolism is blocked. CYP1 enzymes play a role in regulating the biological effects of FICZ [3]. FICZ treatment increases transcript expression of CYP1A1 in a dose-dependent manner in both the parental iPSC line and the CYP1A1 targeted clone [4].
Cell Research	The cell viability of CEH treated with FICZ or TCDD is studied with the untreated cells (used as a live cell control) and sodium hypochlorite (5%)-treated cells (used as a dead cell control). This assay is based upon the bioluminescent measurement of adenosine triphosphate (ATP) that is present in all metabolically active cells. Luciferase is utilized in this method to catalyze the formation of light from ATP and luciferin. CEH is lysed 24 h after dosing and the luminescence emitted from the ATP-dependent oxidation of luciferin is measured with a LuminoSkan Ascent luminometer [2].

Solubility Information

Solubility	DMSO: 10 mg/mL (35.17 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5173 mL	17.5864 mL	35.1729 mL
5 mM	0.7035 mL	3.5173 mL	7.0346 mL
10 mM	0.3517 mL	1.7586 mL	3.5173 mL
50 mM	0.0703 mL	0.3517 mL	0.7035 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.

Reference

Mohammadi-Bardbori A, et al. The highly bioactive molecule and signal substance 6-formylindolo[3,2-b] carbazole (FICZ) plays bi-functional roles in cell growth and apoptosis in vitro. Arch Toxicol. 2017 Mar 13