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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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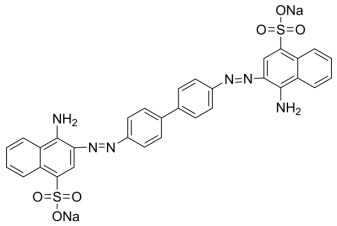
Congo Red

Cat. No.:	HY-D0236
CAS No.:	573-58-0
Molecular Formula:	$C_{32}H_{22}N_6Na_2O_6S_2$
Molecular Weight:	697
Target:	Fluorescent Dye
Pathway:	Others
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 20 mg/mL (28.69 mM; Need ultrasonic)

H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.4347 mL	7.1736 mL	14.3472 mL
	5 mM	0.2869 mL	1.4347 mL	2.8694 mL
	10 mM	0.1435 mL	0.7174 mL	1.4347 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: ≥ 2 mg/mL (2.87 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2 mg/mL (2.87 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Congo Red is an azo dye. Congo Red (CR) binding been used as a diagnostic test for the presence of amyloid in tissue sections.

In Vitro

Congo Red histochemical stain may serve as a simple screening tool for investigating if the aggregates in mutant cells have misfolded β-pleated sheet secondary structures. Congo Red histochemical dye has the ability to bind specifically to crossed β-pleated sheet structures. Wild-type HSPB1 should maintain protein homeostasis by binding proteins in non-native conformations, thereby preventing substrate aggregation. The T139M mutant, however, fails in this function and results in an accumulation of misfolded proteins, which are targeted by Congo Red for intercalating between the β-pleated sheet structures. Congo Red histochemical stain may serve as a simple tool to investigate if the aggregates in mutant cells have misfolded β-pleated sheet secondary structures[1].

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

PROTOCOL

Cell Assay [1]

HeLa cells are selected for these studies due to their large cytoplasmic volume. Cells transfected with mutant or wild-type HSPB1 constructs are grown on coverslips for 24 hr and then are stained with Congo red to determine if the aggregates display amyloidogenic properties. Briefly, cells are first fixed with 10% formalin for 10 min and stained with 1% Congo red for 5 min, followed by destaining with 0.01% potassium hydroxide in 50% ethanol. Coverslips are then passed through graded ethanol concentrations for dehydration and mounted in a mounting medium and examined by fluorescent microscopy under rhodamine filter[1].

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

CUSTOMER VALIDATION

- Eur J Pharmacol. 2022 Dec 2;175446.

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REFERENCES

[1]. Amornvit J, et al. A novel p.T139M mutation in HSPB1 highlighting the phenotypic spectrum in a family. Brain Behav. 2017 Jul 21;7(8):e00774.

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