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Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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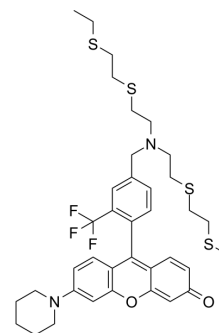
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Copper Fluor-4

Cat. No.:	HY-150086
CAS No.:	2365532-64-3
Molecular Formula:	C ₃₈ H ₄₇ F ₃ N ₂ O ₂ S ₄
Molecular Weight:	749.05
Target:	Fluorescent Dye
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (166.88 mM; Need ultrasonic)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		1.3350 mL	6.6751 mL	13.3502 mL
	5 mM		0.2670 mL	1.3350 mL	2.6700 mL
	10 mM		0.1335 mL	0.6675 mL	1.3350 mL

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

BIOLOGICAL ACTIVITY

Description

Copper Fluor-4 (CF4) is a Cu⁺-specific fluorescent probe based on a rhodol dye scaffold. Copper Fluor-4 has high copper selectivity with a K_d value of 2.9×10⁻¹³ M, particularly over zinc and iron, as well as abundant cellular alkali and alkaline earth metals. Copper Fluor-4 is stable in a physiologically relevant pH regime between 6 and 8 (wavelengths of 415 nm for excitation and 660 nm for emission)^{[1][2][3]}.

In Vitro

Copper Fluor-4 (0.8 μM, 10 min) demonstrates localization of the copper in the soma region, which includes its localization in the perinuclear Golgi region in the PC-12-derived neurons^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Copper Fluor-4 (2 μM, 24 h) can be used to assess changes in labile copper distributions in small living organisms such as zebrafish embryos^[1].
Copper Fluor-4 (10 μM, 3 h) can be used to assess labile Cu levels with a K_d value of 2.9×10⁻¹³ M for a 1:1 copper:probe stoichiometry that is well-matched to monitor labile Cu pools by reversible Cu binding without depleting the total Cu store in worms^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Xiao T, et al. Copper regulates rest-activity cycles through the locus coeruleus-norepinephrine system. *Nat Chem Biol.* 2018 Jul;14(7):655-663.
- [2]. Weishaupt AK, et al. Dysfunction in atox-1 and ceruloplasmin alters labile Cu levels and consequently Cu homeostasis in *C. elegans*. *Front Mol Biosci.* 2024 Feb 8;11:1354627.
- [3]. Chakraborty K, et al. Copper dependent ERK1/2 phosphorylation is essential for the viability of neurons and not glia. *Metallomics.* 2022 Apr 1;14(4):mfac005.
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Caution: Product has not been fully validated for medical applications. For research use only.

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