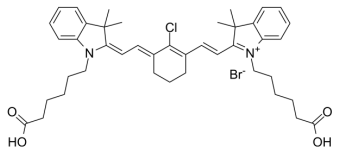
MHI-148

Cat. No.:	HY-D1711
CAS No.:	172971-76-5
Molecular Formula:	$C_{42}H_{52}BrClN_2O_4$
Molecular Weight:	764.23
Target:	Fluorescent Dye
Pathway:	Others
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 20.83 mg/mL (27.26 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3085 mL	6.5425 mL	13.0851 mL
	5 mM	0.2617 mL	1.3085 mL	2.6170 mL
	10 mM	0.1309 mL	0.6543 mL	1.3085 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: ≥ 1 mg/mL (1.31 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1 mg/mL (1.31 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MHI-148 is a near-infrared heptamethine cyanine dye with tumor-targeting properties for cancer detection, diagnosis and research. MHI-148 is immediately taken up and accumulated by lysosomes and mitochondria of tumor cells, but not in lysosomes and mitochondria of normal cells[1].

In Vitro

MHI-148 (10 μM, 1 h) is significantly more absorbed in HT-29 colon carcinoma cells than in normal NIH3T3 fibroblasts and has tumor imaging and targeting properties[1].

MHI-148 (0-1.5 μM, 3 days) causes only negligible toxicity in HT-29 and NIH3T3 cells[1].

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

REFERENCES

[1]. Athira Raveendran, et al. Heptamethine Cyanine Dye MHI-148-Mediated Drug Delivery System to Enhance the Anticancer Efficiency of Paclitaxel. Int J Nanomedicine. 2021 Oct 21;16:7169-7180.

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