DMA

Cat. No.: HY-15621

CAS No.: 188860-26-6

Molecular Formula: $C_{27}H_{28}N_6O_2$

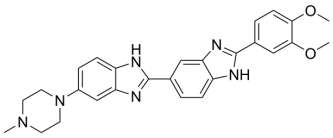
Molecular Weight: 468.55

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 : ≥ 54 mg/mL (115.25 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1342 mL	10.6712 mL	21.3424 mL
	5 mM	0.4268 mL	2.1342 mL	4.2685 mL
	10 mM	0.2134 mL	1.0671 mL	2.1342 mL

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

BIOLOGICAL ACTIVITY

Description

DMA is a fluorescent compound (λ_{ex}=340 nm, λ_{em}=478 nm).

IC_{50} & Target

IC50: 3.4 μM (HeLa cell), 5.3 μM (MCF7 cell)[1]

In Vitro

The newly synthesized bisbenzimidazole derivatives DMA (6c) is evaluated for their cytotoxicity against human tumor cell lines, which are cervix carcinoma cell line (HeLa), breast carcinoma cell line (MCF7) and brain glioma cell line (U87) in comparison to Hoechst. In case of MCF7, the IC_{50} is observed at 5.3 μM for DMA. The IC_{50} determined in the case of HeLa is 3.4 μM for DMA[1].

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

PROTOCOL

Cell Assay

Various human tumor cells (U87, HeLa and MCF7) are maintained as monolayer at 37°C in 5% CO_2 using DMEM medium. Approximately 3000-8000 cells/well are seeded in 96-well plates containing 200 μL of medium and incubated for 24 h. The

culture medium is replaced by fresh medium containing 1, 10, 50, 100 μM of DMA (6c) and incubated for 24, 48 and 72 h. The cell viability is determined by the MTT assay. The light absorbance is measured using a microplate reader[1].

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

REFERENCES

[1]. Singh M, et al. Synthesis and biological activity of novel inhibitors of topoisomerase I: 2-aryl-substituted 2-bis-1H-benzimidazoles. Eur J Med Chem. 2011 Feb;46(2):659-69.

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