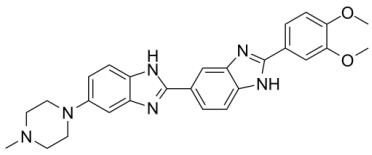
Data Sheet

Product Name:	DMA
Cat. No.:	CS-1309
CAS No.:	188860-26-6
Molecular Formula:	C27H28N6O2
Molecular Weight:	468.55
Target:	Others
Pathway:	Others
Solubility:	DMSO : ≥ 54 mg/mL (115.25 mM)



BIOLOGICAL ACTIVITY:

DMA is a fluorescent compound (λ_{ex}=340 nm, λ_{em}=478 nm). IC50 & 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].

PROTOCOL (Extracted from published papers and Only for reference)

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].

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.

CAIndexNames:

2,5'-Bi-1H-benzimidazole, 2'-(3,4-dimethoxyphenyl)-5-(4-methyl-1-piperazinyl)-

SMILES:

CN1CCN(C2=CC=C3C(N=C(C4=CC=C5C(N=C(C6=CC=C(OC)C(OC)=C6)N5)=C4)N3)=C2)CC1

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