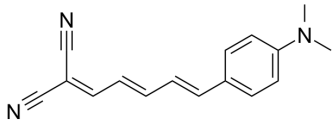
DCDAPH

Cat. No.:	HY-D1684
CAS No.:	125113-96-4
Molecular Formula:	$C_{16}H_{15}N_3$
Molecular Weight:	249.31
Target:	Amyloid-β
Pathway:	Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

DCDAPH (Compound 2c) is a novel smart NIRF probe for detection of β-amyloid (Aβ) plaques ($\lambda_{ex}/\lambda_{em}$=597/665 nm in PBS). DCDAPH shows high affinity for Aβ aggregates (K_i=37 nM, K_d=27 nM). DCDAPH shows good blood brain barrier permeation and can meet most of the requirements for the detection of Aβ plaques both in vitro and in vivo[1].

In Vitro

DCDAPH (0-10 μM; 24 h) treatment shows no toxicity to human neuronal cells[1].

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

Cell Viability Assay[1]

Cell Line:	SH-SY5Y cells
Concentration:	0, 0.1, 1, and 10 μM
Incubation Time:	24 hours
Result:	Showed no marked toxicity to this human neuronal cell line at 10 μM.

In Vivo

Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).

Fluorescent Staining of DCDAPH to Aβ Plaques in Mouse Brain[1].

1. Mouse should be i.v. injected with DCDAPH (0.4 mg/kg, 20% DMSO (HY-Y0320), 80% propylene glycol (HY-Y0921), 50 μL), and sacrificed at 30 min after injection.
2. The brains should be excised, embedded in optimum cutting temperature compound (OCT), and frozen in powdered dry ice immediately.
3. Frozen sections of 20 μm should be cut.
4. Fluorescent observation (Cy5 filter set).

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

REFERENCES

[1]. Mengchao Cui, et al. Smart near-infrared fluorescence probes with donor-acceptor structure for in vivo detection of β-amyloid deposits. J Am Chem Soc. 2014 Mar 5;136(9):3388-94.

Caution: Product has not been fully validated for medical applications. For research use only.

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