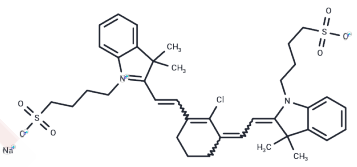
Data Sheet (Cat.No.TD0106)

TargetMol

IR-783

Chemical Properties



CAS No. : 115970-66-6

Formula: C38H46ClN2NaO6S2

Molecular Weight: 749.35

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	IR 783 is a heptamethine cyanine fluorescent probe for in vivo imaging of tumor cells. It displays excitation/emission maxima of 776/798 nm, respectively.
Targets(IC50)	Apoptosis,Others
Cell Research	Instructions I. Solution preparation 1. Preparation of mother solution: Dissolve IR-783 in anhydrous DMSO, DMF or ethanol to prepare a 10-50 mM stock solution. Note: After the stock solution is aliquoted, store it at -20°C in the dark and it can be stably stored for at least 6 months. 2. Preparation of working solution: Dilute the stock solution with an appropriate buffer (such as PBS or cell culture medium) to a working concentration of 1-10 μM, and adjust the specific concentration according to experimental needs. II. Operation steps Cell staining 1. Grow cells to an appropriate density (such as 70-80% confluence). 2. Gently wash the cells with PBS to remove residual culture medium. 3. Add the diluted IR-783 working solution to ensure that the cells are completely immersed. 4. Incubate at 37°C in the dark for 20-30 minutes. 5. Washing: After incubation, remove the dye solution; wash the cells 2-3 times with PBS or fresh culture medium to remove unbound dye. 6. Fluorescence detection: Use a fluorescence microscope, flow cytometer or other fluorescence detection equipment for analysis. The fluorescence excitation wavelength of IR-783 is 780 nm and the emission wavelength is 810 nm. It is mainly used for fluorescence imaging in the near-infrared region. Notes: 1) IR-783 is light-sensitive and should be kept away from light as much as possible during operation. 2) Please wear gloves before use to avoid direct contact with skin or mucous membranes. 3) After the experiment is completed, data collection should be performed as soon as

Cell Research	possible to obtain the best fluorescence signal. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 27.5 mg/mL (36.7 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3345 mL	6.6724 mL	13.3449 mL
5 mM	0.2669 mL	1.3345 mL	2.669 mL
10 mM	0.1334 mL	0.6672 mL	1.3345 mL
50 mM	0.0267 mL	0.1334 mL	0.2669 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Komura Y,et al. Photodynamic Therapy Using IR-783 Liposomes for Advanced Tongue and Breast Cancers in Humans. J Funct Biomater. 2024 Dec 2;15(12):363.

Park Y, Park MH, Hyun H. Structure-Inherent Tumor-Targeted IR-783 for Near-Infrared Fluorescence-Guided Photothermal Therapy. Int J Mol Sci. 2024 May 13;25(10):5309.

Adams CJ, Krueger R, Meade TJ. A Multimodal Ca(II) Responsive Near IR-MR Contrast Agent Exhibiting High Cellular Uptake. ACS Chem Biol. 2020 Feb 21;15(2):334-341.