IR 813 tosylate

Cat. No.: HY-W248594

CAS No.: 134127-48-3

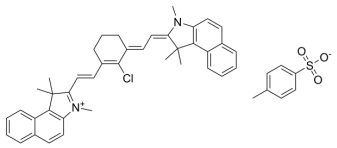
Molecular Formula: $C_{47}H_{47}ClN_2O_3S$

Molecular Weight: 755.41

Target: Fluorescent Dye

Pathway: Others

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (82.74 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3238 mL	6.6189 mL	13.2378 mL
	5 mM	0.2648 mL	1.3238 mL	2.6476 mL
	10 mM	0.1324 mL	0.6619 mL	1.3238 mL

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

BIOLOGICAL ACTIVITY

Description

IR 813 tosylate is a near-infrared (NIR) fluorescent dye (λ_{ex}=815 nm, λ_{em}=840 nm) and can be used for visualizing regional lymph nodes in mice[1].

In Vitro

IR 813 (17.3 μM, 2 h) tosylate induces a 31.4% hemolysis in red blood cells[1].
IR 813 (5.9 μM, 24 h) tosylate induces 50% cell death in MRC-5 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

IR 813 tosylate displays a maximum fluorescence intensity at 4 h postinjection together with a rapid extravasation, when being used for visualizing regional lymph nodes in mice[1].
Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs)[1].
1. Animal: Ten-week-old female Balb/cOlaAnN mice are kept in a 12 h light/dark cycle to reduce tissue autofluorescence in the NIR region, and had access to food and water ad libitum.
2. Dose: A single dose 5.1 nmol of IR 813 dye (20 μL of 0.173 mg/mL, dissolved in a PEG-400/ethanol/water=3:2:5, v/v/v solution) is subcutaneous injected in the right anterior paw of mice.
3. Imaging: Using the Fluobeam700 NIR imaging system to perform in vivo optical imaging (739 nm excitation light (3.5 mW),

750 nm long-pass emission cutoff filter).Fluorescence intensity in the axillary lymph node (ALN) is recorded for 1 week (5 min, 1 h, 4 h, 24 h, 7 days).

4. Data analysis: Semiquantitative data is obtained from the fluorescence images using ImageJ 1.44 software.

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REFERENCES

[1]. Marion Hell, et al. Surface chemistry architecture of silica nanoparticles determine the efficiency of in vivo fluorescence lymph node mapping. ACS Nano. 2013 Oct 22;7(10):8645-57.

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