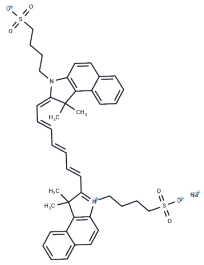
Data Sheet (Cat.No.T14875)

TargetMol

Indocyanine green

Chemical Properties



CAS No. : 3599-32-4

Formula: C43H47N2NaO6S2

Molecular Weight: 774.96

Storage: Keep away from direct sunlight,Keep away from moisture,Store under nitrogen
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	Indocyanine green (Cardiogreen) is a low toxicic fluorescent agent, is a tricarbocyanine dye,has been widely used in medical diagnostics, such as determining cardiac output, hepatic function, and liver blood flow, and for ophthalmic angiography.
Targets(IC50)	Others
In vitro	Cardiogreen(ICG-PDT) at concentrations 1000μg/mL, induced the significant expression of BAX in HGF cells; however, the laser irradiation as well as ICG showed no significant effects on the expression of these genes. Treatment with ICG alone, laser irradiation and ICG-PDT caused no observable BCL-2 gene expression changes between the tested and control groups.
Animal Research	Indocyanine green is used to detect the distribution of oral polysaccharide nanoemulsions Operation steps: a. Dissolve indocyanine green in polysaccharide aqueous solution and then add to nanoemulsion to form a complex (the final concentration of indocyanine green in both solutions is 0.05 mg/mL); b. After oral administration of the complex, mice were fasted for 4 hours and then placed in a real-time imaging device to observe the distribution of fluorescence in vivo. Cell experiment operation steps: a. Add indocyanine green at a final concentration of 1mg/mL to serum-free hepatocyte culture medium and culture at 37°C for 1 hour; b. Remove serum-free culture medium and wash cells three times with PBS; c. Examine and image cells under a microscope. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	H2O: 10 mg/mL (12.9 mM),Sonication is recommended. DMSO: 21.67 mg/mL (27.96 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 2 mg/mL (2.58 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2904 mL	6.4519 mL	12.9039 mL
5 mM	0.2581 mL	1.2904 mL	2.5808 mL
10 mM	0.129 mL	0.6452 mL	1.2904 mL
50 mM	0.0258 mL	0.129 mL	0.2581 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

Stanescu-Segall D, Jackson TL. Vital staining with indocyanine green: a review of the clinical and experimental studies relating to safety. Eye (Lond). 2009 Mar;23(3):504-18.

Zhang W, Cui Y, Lu M, et al.Hormonally and chemically defined expansion conditions for organoids of biliary tree Stem Cells.Bioactive Materials.2024, 41: 672-695.