

PRODUCT INFORMATION

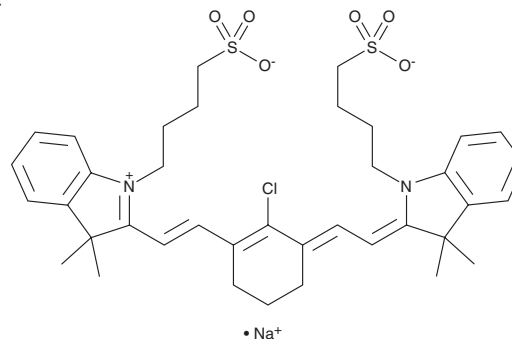


IR 783

Item No. 31633

CAS Registry No.: 115970-66-6
Formal Name: 2-[2-[2-chloro-3-[2-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-3H-indolium, inner salt, monosodium salt

MF: C₃₈H₄₆ClN₂O₆S₂ • Na
FW: 749.4
Purity: ≥95%
UV/Vis.: λ_{max}: 786 nm
Ex./Em. Max: 633/780 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

IR 783 is supplied as a crystalline solid. A stock solution may be made by dissolving the IR 783 in the solvent of choice, which should be purged with an inert gas. IR 783 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of IR 783 in these solvents is approximately 1 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of IR 783 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of IR 783 in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

IR 783 is a heptamethine cyanine fluorescent probe for *in vivo* imaging of tumor cells.^{1,2} It displays excitation/emission maxima of 633/780 nm, respectively. IR 783 is transported into tumor cells, an effect that can be blocked by the organic anion transporting polypeptide (OATP) inhibitor sulfobromophthalein (bromosulfalein; Item No. 21058).¹ *In vivo*, IR 783 (11.25 mg/kg) preferentially accumulates in tumor tissue in an ACHN kidney cancer mouse xenograft model.² It has been conjugated to polyethylenimines for tumor-specific gene delivery.³

References

1. Yuan, J., Yi, X., Yan, F., *et al.* Near-infrared fluorescence imaging of prostate cancer using heptamethine carbocyanine dyes. *Mol. Med. Rep.* **11(2)**, 821-828 (2015).
2. Yang, X., Shao, C., Wang, R., *et al.* Optical imaging of kidney cancer with novel near-infrared heptamethine carbocyanine fluorescent dyes. *J. Urol.* **189(2)**, 702-710 (2013).
3. De Los Reyes-Berbel, E., Salto-Gonzalez, R., Ortega-Muñoz, M., *et al.* PEI-NIR heptamethine cyanine nanotheranostics for tumor targeted gene delivery. *Bioconjug. Chem.* **29(8)**, 2561-2575 (2018).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM