JC-1 . iodide

Fluorescent probe to test Pgp activity

JC-1 is a very sensitive fluorescent probe to test Pgp activity. In acute myeloid leukemia (AML) samples JC-1 is capable of distinguishing between resistant, intermediate and sensitive groups, whereas rhodamine 123 only recognizes the resistant group. As in cell lines, the red emission band (597nm) of JC-1 appears to be more convenient for detection of low-level resistance in AML than other probes, such as rhodamine 123 (529nm) or calcein-AM (517nm). Green fluorescent JC-1 existing as a monomer (λ_{em}=527nm) at low concentrations or at low membrane potential. However, at higher concentrations (aqueous solutions above 0.1µM) or higher potentials, JC-1 forms red fluorescent 'J-aggregates', which exhibit a broad excitation spectrum and a very narrow emission spectrum (λ_{em}=590nm). JC-1 stains mitochondria in living cells in a membrane potential-dependent function. JC-1 has been used in a functional assay of multidrug resistance cells and in apoptosis related mitochondrial modifications.

Citations: 26 View Online »

Ordering Information

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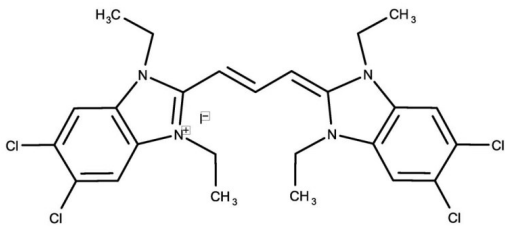
ALX-620-053-M005	5mg

Manuals, SDS & CofA

View Online »


H3C
CH3
N
N
N+
I-
Cl
Cl
CH3
CH3
Cl
Cl

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended.
Handling	Protect from light, especially when in solution. Keep cool and dry.
Long Term Storage	+4°C
Shipping	Ambient Temperature

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	5,5′,6,6′-Tetrachloro-1,1′,3,3′-tetraethylbenzimidazolylcarbocyanine iodide
Appearance	Red solid.
CAS	47729-63-5
Formula	$C_{25}H_{27}Cl_4IN_4$
MW	652.2
Purity	≥98% (HPLC)
Solubility	Soluble in DMSO or methanol.

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