JC-1

Catalog No.C14467 Batch:C1446703

Product Datasheet

Technical Data

Formula	$C_{25}H_{27}Cl_5N_4$					
Molecular Weight	560.77	**CAS No.**	3520-43-2			
Solubility (25°C)*	In vitro	DMSO	33 mg/mL (58.84 mM)			
		Water	Insoluble			
		Ethanol	Insoluble			
	In vivo (Add solvents to the product individually and in order)	Oral Administration	Homogeneous suspension	CMC-NA	≥5mg/ml	Taking the 1 mL working solution as an example, add 5 mg of this product to 1 ml of CMC-Na solution, mix evenly to obtain a homogeneous suspension with a final concentration of 5 mg/ml.

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Concentration \ Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.7833 mL	8.9163 mL	17.8326 mL
5 mM	0.3567 mL	1.7833 mL	3.5665 mL
10 mM	0.1783 mL	0.8916 mL	1.7833 mL
50 mM	0.0357 mL	0.1783 mL	0.3567 mL

Biological Activity

Description	JC-1 (CBIC2, NK 1420), a fluorescent lipophilic carbocyanine dye, is a mitochondrial potential (ΔΨ(m)) marker. This compound's fluorescence is usually excited by the 488 nm laser wavelength common in flow cytometers.
In vitro	1. Take the 6-well plate as an example for cell planking, and the density is 5×10^5/mL. Incubate overnight in 5% CO2 incubator at 37℃. Note: it is suggested that the cell density during apoptosis induction should not exceed 1×10^6/ml, which can also be cultured to the appropriate density according to your own cell type. 2. Take 0.5 mL suspension into sterile centrifuge tube; 400 g centrifugation for 3-5 min; Discard the supernatant. 3. The cells were resuspended with 1ml of this compound working solution and incubated in 5% CO2 incubator at 37℃for 15-30 min. 4. Centrifugation at room temperature for 5 min at 400 g; Suck of the supernatant. 5. The cells were resuspended with 2 mL cell culture medium or buffer, and then centrifuged at room temperature for 5 min at 400 g; Discard the supernatant and repeat twice. 6. Resuspend the cells with 1mL of fresh culture medium or buffer, and immediately conduct subsequent flow cytometry or fluorescence microscope observation. 7. Data analysis (flow cytometry) : mitochondria of healthy cells containing red aggregates of this compound were detected by FL2 channel; Apoptotic or unhealthy cells containing green monomer of this compound were detected by FL1 (FITC) channel. 8. If used for enzyme labeling instrument, use 300 μL buffer resuspended cells; Then 100 per hole μ Transfer the stained cells to a light tight 96 well plate with the amount of L, and then conduct fluorescent enzyme label plate analysis.

Protocol (from reference)

Cell Assay:[1]

- **Cell lines**
  hippocampal neurons and glial cells
- **Concentrations**
  1 μg/ml
- **Incubation Time**
  15 min
- **Method**
  JC-1 is dissolved in dimethylsulfoxide (DMSO) as a 2 mg/ml stock. This compound is excited at 490 nm and an optical image splitter device is attached to the microscope to separate spectrally the green and red components of its fluorescence.

References

https://pubmed.ncbi.nlm.nih.gov/21881871/ https://pubmed.ncbi.nlm.nih.gov/23171850/

RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

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