



上海源叶生物科技有限公司
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产品名称: JC-1
产品别名: CBIC2

生物活性:

Description	JC-1 is a fluorescent lipophilic carbocyanine dye used to measure mitochondrial membrane potential.																	
In Vitro	JC-1 (2.5 μM) exposed to murine L1210 lymphoblasts, can be detected the presence of both cytoplasmic JC-1 monomer and mitochondrial J-aggregates in these cells. JC-1 fluorescence is usually excited by the 488 nm laser wavelength common in flow cytometers[1]. Fluorescent labeling of mitochondria with either JC-1 (1 μg/mL, 15 min), reveals that are distributed irregularly, resulting in regions of high and low mitochondrial content within astrocytes[2]. JC-1 has been shown to interact with α-synuclein at the acidic C-terminal region with a Kd of 2.6 μM. JC-1 itself does not accelerate the protein aggregation of α-synuclein in the absence of iron, insted, it decelerates the aggregation process by extending the lag phase approx[3]. JC-1 is avidly accumulated in sensitive K562 cells where it displays both a green cytoplasmic and red mitochondrial fluorescence. JC-1 is poorly accumulated in resistant K562 cells, which displays only a slight green fluorescence[4].																	
Solvent&Solubility	In Vitro: DMSO : ≥ 15 mg/mL (23.00 mM) H₂O : < 0.1 mg/mL (insoluble) * "≥" means soluble, but saturation unknown.																	
	<table><tr><td rowspan="4">Preparing Stock Solutions</td><td> Solvent Concentration Mass </td><td>1 mg</td><td>5 mg</td><td>10 mg</td></tr><tr><td>1 mM</td><td>1.5332 mL</td><td>7.6660 mL</td><td>15.3320 mL</td></tr><tr><td>5 mM</td><td>0.3066 mL</td><td>1.5332 mL</td><td>3.0664 mL</td></tr><tr><td>10 mM</td><td>0.1533 mL</td><td>0.7666 mL</td><td>1.5332 mL</td></tr></table>	Preparing Stock Solutions	Solvent Concentration Mass	1 mg	5 mg	10 mg	1 mM	1.5332 mL	7.6660 mL	15.3320 mL	5 mM	0.3066 mL	1.5332 mL	3.0664 mL	10 mM	0.1533 mL	0.7666 mL	1.5332 mL
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	*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。 储备液的保存方式和期限: -80°C, 6 months; -20°C, 1 month (protect from light)。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。 In Vivo: 请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 In Vitro 方式配制澄清的储备液，再依次添加助溶剂： ——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用；以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶 1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline Solubility: 1.25 mg/mL (1.92 mM); Suspended solution; Need ultrasonic 此方案可获得 1.25 mg/mL (1.92 mM)的均匀悬浊液，悬浊液可用于口服和腹腔注射。 以 1 mL 工作液为例，取 100 μL 12.5 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀，向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。 2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline)																	



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References	[1]. A Perelman, et al. JC-1: alternative excitation wavelengths facilitate mitochondrial membrane potential cytometry. Cell Death Dis. 2012 Nov 22;3:e430. [2]. Vera C. Keil, et al. Ratiometric high-resolution imaging of JC-1 fluorescence reveals the subcellular heterogeneity of astrocytic mitochondria. Pflügers Archiv - European Journal of Physiology. 2011;462(5): 693-708. [3]. Jung-Ho LEE, In-Hwan LEE, Young-Jun CHOE, et al. Real-time analysis of amyloid fibril formation of α-synuclein using a fibrillation-state-specific fluorescent probe of JC-1. Biochem. J. 2009, 418:311-323. [4]. Salvioli S, et al. JC-1, but not DiOC6(3) or rhodamine 123, is a reliable fluorescent probe to assess delta psi changes in intact cells: implications for studies on mitochondrial functionality during apoptosis. FEBS Lett. 1997 Jul 7;411(1):77-82.

源叶生物