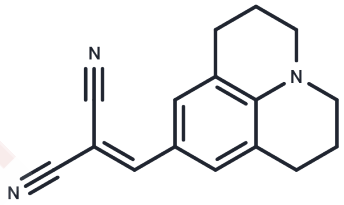
Data Sheet (Cat.No.T37066)

TargetMol

DCVJ

Chemical Properties



CAS No. : 58293-56-4

Formula: C16H15N3

Molecular Weight: 249.31

Storage: Keep away from direct sunlight,Keep away from moisture
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	DCVJ (9-(2,2-Dicyanovinyl)julolidine) is a fluorescent dye showing high sensitivity to lag phase early amyloid β-peptide, and it is an identification of α-syn production.
Targets(IC50)	Others
In vitro	Instructions 1. Preparation of stock solution and working solution: 1) Preparation of stock solution: DCVJ is usually dissolved in an organic solvent such as dimethyl sulfoxide (DMSO) to prepare a stock solution. The concentration of the stock solution is usually 1-10mM. 2) Preparation of working solution: The working solution is appropriately diluted according to the experimental purpose. If necessary, a concentration gradient can be set. The working concentration is usually between 1-10 μM. 2. Sample preparation and staining: 1) DCVJ is added to the sample (such as cells or tissue sections) for staining. The specific concentration depends on the experimental design. 2) The incubation time for staining will vary, usually 30 minutes to 1 hour, and the temperature is generally room temperature. 3. Detection: 1) DCVJ has a fluorescence absorption/emission spectrum at about 489/505 nm, which can be monitored by fluorescence microscopy or flow cytometry. 2) When monitoring cell degranulation (such as mast cells), changes in fluorescence intensity can reflect changes in molecular interactions or lipid bilayers. 4. Analysis: The rearrangement of microtubules and actin filaments, as well as changes in the lipid bilayer during cellular events such as degranulation, can be assessed by tracking changes in fluorescence intensity. Notes: 1) DCVJ should be stored in a dark, cool place and protected from light as it is light sensitive and easily photobleached. 2) Appropriate protective gear such as gloves and lab coats should be worn when using it. The above information is based on published literature. Experimental procedures

In vitro	should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 50 mg/mL (200.55 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble) DMF: 10 mg/mL (40.11 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.0111 mL	20.0554 mL	40.1107 mL
5 mM	0.8022 mL	4.0111 mL	8.0221 mL
10 mM	0.4011 mL	2.0055 mL	4.0111 mL
50 mM	0.0802 mL	0.4011 mL	0.8022 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

Kuang G, Murugan NA, Ågren H. Mechanistic Insight into the Binding Profile of DCVJ and α-Synuclein Fibril Revealed by Multiscale Simulations. ACS Chem Neurosci. 2019 Jan 16;10(1):610-617.
Kalel R, et al. Interaction of a Julolidine-Based Neutral Ultrafast Molecular Rotor with Natural DNA: Spectroscopic and Molecular Docking Studies. J Phys Chem B. 2016 Sep 22;120(37):9843-53.
Haidekker MA, et al. Phospholipid-bound molecular rotors: synthesis and characterization. Bioorg Med Chem. 2002 Nov;10(11):3627-36.