

PRODUCT INFORMATION



9-(2,2-Dicyanovinyl)julolidine

Item No. 21016

CAS Registry No.: 58293-56-4
Formal Name: 2-[(2,3,6,7-tetrahydro-1H,5H-benzo[*ij*]quinolizin-9-yl)methylene]-propanedinitrile

Synonyms: DCVJ, 9-Julolidine Methylene Malononitrile, NSC 160064

MF: C₁₆H₁₅N₃

FW: 249.3

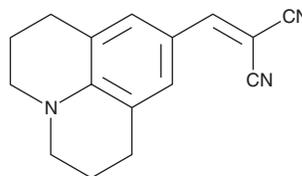
Purity: ≥98%

UV/Vis.: λ_{max}: 455 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

9-(2,2-Dicyanovinyl)julolidine (DCVJ) is supplied as a crystalline solid. A stock solution may be made by dissolving the DCVJ in the solvent of choice, which should be purged with an inert gas. DCVJ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DCVJ in ethanol is approximately 0.2 mg/ml and approximately 20 mg/ml in DMSO and DMF.

DCVJ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DCVJ should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. DCVJ has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DCVJ is a fluorogenic dye that is considered a fluorescent molecular rotor because its properties depend on the rotational relaxation of the molecule, which can be influenced by the viscosity of the solvent used.¹ It has an excitation maximum at approximately 450 nm, and its emission is approximately 480 or 505 nm for low or high viscosity solvents, respectively. DCVJ has been used to study tubulin dynamics because its fluorescence increases when bound to tubulin sheets but is lower when bound to microtubules.

Reference

1. Kung, C.E. and Reed, J.K. Fluorescent molecular rotors: A new class of probes for tubulin structure and assembly. *Biochemistry* **28**(6), 6678-6686 (1989).

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.

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