

FT-DX2520



INTERFINE CHEMICALS

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FLUORO-JADEB

Product Description

Name :	FLUORO-JADE B	
Catalog Number :	FP-DX2521, 30 mg	FP-DX2522, 150 mg
Molecular Weight :	MW= 681	
Solubility:	Highly soluble in water and bases; moderately soluble in alcohol and weak acids.	
Absorption / Emission :	$\lambda_{exc}/\lambda_{em} = 480/525$ nm	
Purity:	Thin layer chromatography using cellulose plates and a solvent system of n-propinol, water, and ammonium hydroxide (6:5:2) revealed the presence of two fluorescent isomers and two trace non-fluorescent bands. No amount of fluorescein or Fluoro-Jade was present.	

Storage: The powder should be stored well sealed at room temperature, preferably in a desiccator, due to its hygroscopic nature.

The 0.01% stock solution in distilled water should be stored at +5°C.

The 0.0004% working solution in 0.1% acetic acid should be prepared fresh and not be stored or reused.

Introduction

Fluoro-Jade B, like its predecessor, Fluoro-Jade, is an anionic fluorescein derivative useful for the histological staining of neurons undergoing degeneration. However, Fluoro-Jade B has an even greater specific affinity for degenerating neurons. This notion is supported by the conspicuous staining of degenerating neuronal elements with minimal background staining. This improved signal-to-noise ratio means that fine neuronal processes including distal dendrites, axons and axon terminals can be more readily detected and documented. Although the staining time and dye concentration are reduced, the method is as rapid, simple and reliable as the original Fluoro-Jade technique. Like Fluoro-Jade, Fluoro-Jade B is compatible with a number of other labeling procedures including immunofluorescent and fluorescent Nissl techniques.

Directions for use

Classification

Polyanionic fluorescein derivative

Histological staining

Following appropriate survival interval, animals were perfused with 300 ml of 0.1 M neutral phosphate buffered 10% formalin (4% formaldehyde) via the ascending aorta, while clamping off the descending aorta. The brains were postfixed at least overnight in the same fixative solution plus 20% sucrose. Tissue was cut on a freezing sliding microtome at a thickness of 25 μ m. The sections were collected in 0.1 M neutral phosphate buffer. The sections were typically mounted on 1% gelatin coated slides and then air dried on a slide warmer at 50 degrees C for at least half an hour. The slides were first immersed in a solution containing 1% sodium hydroxide in 80%

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alcohol (20 ml of 5% NaOH added to 80 ml absolute alcohol) for 5 minutes. This was followed by 2 minutes in 70% alcohol and 2 minutes in distilled water. The slides were then transferred to a solution of 0.06% potassium permanganate for 10 minutes, preferably on a shaker table to insure consistent background suppression between sections. The slides were then rinsed in distilled water for 2 minutes. The staining solution was prepared from a 0.01% stock solution for Fluoro-Jade B that was made by adding 10mg of the dye powder to 100ml of distilled water. To make up 100ml of staining solution, 4ml of the stock solution was added to 96ml of 0.1% acetic acid vehicle. This results in a final dye concentration of 0.0004%. The stock solution, when stored in the refrigerator was stable for months, whereas the staining solution was typically prepared within 10 minutes of use and was not reused. After 15 minutes in the staining solution, the slides were rinsed for one minute in each of three distilled water washes. Excess water was removed by briefly (about 15 s) draining the slides vertically on a paper towel. The slides were then placed on a slide warmer, set at approximately 50 degrees C, until they were fully dry, (eg. 5-10 min). The dry slides were cleared by immersion in xylene for at least a minute before coverslipping with DPX (FP-47017.), a non-aqueous non-fluorescent plastic mounting media.

Analysis

The tissue was then examined using an epifluorescent microscope with blue (450-490 nm) excitation light. A barrier filter that allows passage of all wavelengths longer than 515 nm will result in a yellow-green emission color, where as a notch filter, (eg. 515-565 nm) will result in a green emission color. Most filters designed for visualizing fluorescein or FITC (eg. the Nikon B-2A or the B-3A filter cubes) will be suitable for visualizing Fluoro-Jade B.

References

- **Chaturvedi R.** *et al.*, Transducer of regulated CREB-binding proteins (TORCs) transcription and function is impaired in Huntington's disease, *Hum. Mol. Genet.*, 21: 3474 - 3488 (2012) [Abstract](#)
- **Liu F.** *et al.*, TTC, Fluoro-Jade B and NeuN staining confirm evolving phases of infarction induced by Middle Cerebral Artery Occlusion, *J Neurosci Methods*. 179(1): 1-8 (2009) [Article](#)
- **Schmued L.** *et al.*, FLUORO-JADE B; A HIGH AFFINITY FLUORESCENT MARKER FOR THE LOCALIZATION OF NEURONAL DEGENERATION. *Brain Res*. Vol. 874-2 pgs. 123-130 (2000) [Abstract](#)
- **Spescha R.** *et al.*, Deletion of the ageing gene p66^{Shc} reduces early stroke size following ischaemia/reperfusion brain injury, *Eur. Heart J.*, 10.1093 (2012) [Abstract](#)

Related products

- Dextran-FITC, 2 MDa, FP-CL3250
- Fluorescein-12-dUTP, FP-BC5471

Ordering information

[Catalog size quantities and prices may be found at www.interchim.com/](http://www.interchim.com/)

Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : FluoProbes® / Interchim; Hotline : +33(0)4 70 03 73 06

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