



Fluoro-Jade C Ready-to-Dilute Staining Kit for identifying Degenerating Neurons

Catalogue No.: TR-100-FJ

Description: The causes and effects of neuronal degeneration are of major interest to a wide variety of neuroscientists. Paralleling this growing interest is an increasing number of methods applicable to the detection of neuronal degeneration. Fluoro-Jade® C stains all degenerating neurons regardless of specific insult or mechanism of cell death. Fluoro-Jade C exhibits the greatest signal to background ratio, as well as the highest resolution. This translates to a stain of maximal contrast and affinity for degenerating neurons. This makes it ideal for localising not only degenerating nerve cell bodies but also distal dendrites, axons and terminals. The dye is highly resistant to fading and is compatible with virtually all histological processing and staining protocols.

Applications: The Fluoro-Jade C 'Ready to Dilute' (RTD™) Staining Kit provides an easy to use assortment of Fluoro-Jade C, DAPI, sodium hydroxide and potassium permanganate in liquid form. Following our detailed protocol, Fluoro-Jade C labelled degenerating neurons are visualised with blue light excitation while DAPI counter stained cell nuclei are visualised with ultra-violet illumination. The Fluoro-Jade C Staining Kit can be used on all kinds of preserved tissues, including fresh-frozen, paraformaldehyde or formalin fixed, and formalin fixed, paraffin-embedded tissues.

Comments: MATERIALS PROVIDED

Sodium Hydroxide, Solution A (Dilute 1:10 prior to use) - 40 mL
Potassium Permanganate, Solution B (Dilute 1:10 prior to use) - 40 mL
Fluoro-Jade C, Solution C (Dilute 1:10 prior to use) - 40 mL
DAPI, Solution D (Add to diluted Fluoro-Jade C) - 40 mL

EQUIPMENT AND REAGENTS NEEDED

Gelatin coated microscope slides
Staining dishes/Coplin jars
Cover slips
DPX mounting media
Slide warmer
Convection oven
Distilled water
Ethanol
Xylene

NUMBER OF SLIDES PROCESSED:

The actual number of slides processed by this kit will depend largely upon the vessel that is used to incubate the slides. If using a standard Coplin Jar, its capacity is 50 mL and typically holds 5 slides per jar. If using such a device, then 80-100 slides stained per 50 ml of working

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solution (or, 5 ml of stock solution) could be processed in one day. Note the diluted dye is NOT stable and will not store overnight. It is best to use freshly diluted dye each time an experimental batch is started.

Specificity: Degenerating neurons, and neuronal degeneration. There is no specific staining in normal healthy brain.

Cross-reactivity: Note: Some researchers under some conditions report blood vessel staining with Fluoro Jade. This may be because Fluoro Jade is an analogue of eosin (which stains blood cells). In general, good perfusion and preparation of the tissue should help prevent blood vessel staining but it may not be possible to eliminate it entirely. In our experience it is generally possible to distinguish neuronal from blood vessels staining by eye.

Form: The reagents in the Fluoro Jade kit are all supplied in a liquid format and are ready-to-dilute.

Reconstitution: Dilute solutions as directed in the protocol instructions. Sometimes small precipitates may be present in the stock or diluted solutions.

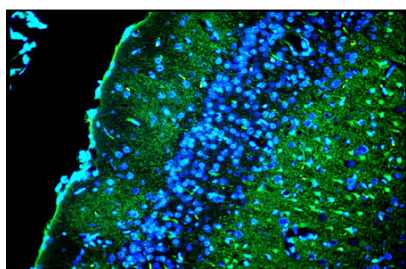
Complete mixing of the diluted solutions usually dissolves the precipitates. The precipitates, if not removed, do not usually cause any difficulties if the washing steps are followed as instructed. Optional: For entirely clean solutions Biosensis recommends filtering the diluted solution through ethanol and NaOH compatible syringe or vacuum filter devices prior to contact with tissue slides.

Storage: The kit can be transported at room temperature. Once received, the kit can be stored for up to 12 months at 4°C protected from light. Diluted dye solutions are not stable and should be may fresh each day. The other diluted solutions can be reused for up to 1 week if stored refrigerated and protected from light.

Specific References: Iseli CE, Merwin WH 3rd, Klatt-Cromwell C, Hutson KA, Ewend MG, Adunka OF, Fitzpatrick DC, Buchman CA. (2014) "Effect of Cochlear Nerve Electrocautery on the Adult Cochlear Nucleus." *Otol Neurotol*. PMID: 25280052 [Epub ahead of print] Application: IH(P)

Reagent Kit protocol: Please refer to our online product listing for current protocol/MSDS versions.

MSDS: Please refer to our online product listing for current protocol/MSDS versions.



Double exposure using combined blue and ultraviolet epi-fluorescent illumination of the superficial layers of the cingulate rat cortex exposed to kainic acid. Layer I contains conspicuous Fluoro-Jade C positive degenerating axon terminals. Layer II contains densely packed DAPI-positive viable granule cells. Layer III contains a mixture of Fluoro-Jade C positive degenerating pyramidal cells and DAPI-positive viable pyramidal cells. Photo is courtesy of Dr. Larry Schmued.

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