Product Information

Hydroxystilbamidine, methanesulfonate/FluoroGold

Catalog Number: F4040

Product Size: 5 mg

Application Scope: Cytoplasmic dye, neuron tracer

Parameters

Appearance: Yellow solid soluble in water

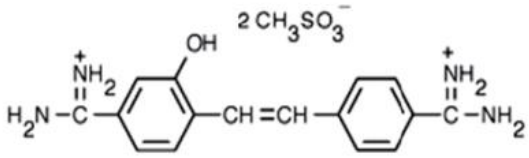
Ex/Em: 361/536 nm

CAS No.: 223769-64-0

Molecular Formula: $C_{18}H_{24}N_4O_7S_2$

Molecular Weight: 473

Molecular Structure:



Storage

Store at -20°C and protect from light. When stored as directed, product is stable for at least 12 months.

Description

Hydroxystilbamidine, methanesulfonate (also called Fluorogold) has been used extensively as a retrograde tracer for neurons and also a histochemical stain. Fluorogold can undergo retrograde axonal transport, it shows extensive filling of dendrites, and has a high resistance to fading.

Protocol

Fluoro-Gold has been successfully used at concentrations ranging from 1-10%. Initially, a 4% concentration is advised. If undesirable necrosis occurs at the injection site, or labeling is too intense, reduce the concentration to a lower solution.

1. Dye Administration

A. Pressure Injection: Volumes injected range from 0.05-1 µL, typically 0.1-0.2 µL.

B. Iontophoresis: Discrete, small injection sites result from 4 - 10 s pulsed iontophoretic (+5 to +10ua/10min) application.

C. Crystal: A crystal of the tracer can be administered from the tip of a micro-pipette.

Notes

1. For pressure injections through a microsyringe or micropipette, Fluoro-Gold should be dissolved in distilled water or 0.9% saline. Fluoro-Gold may also be utilized as a suspension in 0.2M neutral phosphate buffer, however, the suspended particles may clog a fine micropipette tip. For iontophoresis, a 1% Fluoro-Gold solution is made up in 0.1M acetate buffer (pH=3.3).

2. Almost any fixative, or no fixative, can be used, Phosphate neutral buffered saline containing 4% formaldehyde is frequently employed. Fixatives containing high concentrations of heavy metals (e.g. osmium, mercury) will quench the fluorescence, while high concentrations (over 1%) of glutaraldehyde may increase background fluorescence.

3. Tissue containing Fluoro-Gold may be processed according to virtually any common histological technique. This includes cryostat sections of unfixed tissue (10 µm), frozen sections of fixed tissue (20 µm), and paraffin sections (3-10 µm).

4. Injection Sites: Virtually any central or peripheral nervous system structure can be injected with Fluoro-Gold for analysis of retrograde transport. In the peripheral nervous system,

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ganglia and peripheral targets can be studied. For studies of peripheral nerve, the nerve should be cut or damaged and either dipped in, or injected with 5% solution of Fluoro-Gold. Since Fluoro-Gold is not significantly taken up by intact fibers of passage, the fibers must be cut or severely damaged for uptake of the dye to occur.

5. There are quenching problems with fluorescent dyes. Please avoid light to slow down the fluorescence quenching.

6. For your safety and health, please wear lab coats and disposable gloves.

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