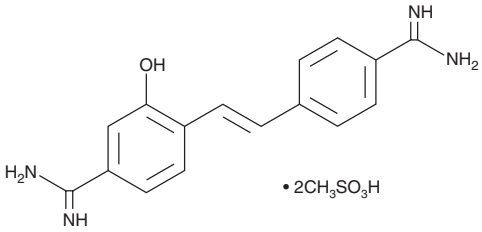
PRODUCT INFORMATION

Hydroxystilbamidine (methanesulfonate)

Item No. 26858

CAS Registry No.: 223769-64-0
Formal Name: 4-[2-[4-(aminoiminomethyl)phenyl]ethenyl]-3-hydroxy-benzenecarboximidamide, dimethanesulfonate
MF: $C_{16}H_{16}N_4O \bullet 2CH_3SO_3H$
FW: 472.5
Ex./Em. Max: 323/620 nm for tissue sections; 360/600 and 360/450 nm for DNA and RNA purposes, respectively
Supplied as: A powder
Storage: -20°C
Stability: ≥4 years
Special Conditions: Light sensitive



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

Hydroxystilbamidine is a fluorescent neuronal retrograde tracer that labels the neuronal cell body as well as proximal dendrites.[1,2] Hydroxystilbamidine, when visualized in tissue sections, displays excitation/emission maxima of 323/620 nm, respectively. It is also a nucleic acid dye that can be used to label DNA and RNA in fixed or unfixed dead cells.[3] It displays an excitation maximum of 360 nm and emission maxima of 450 and 600 nm when bound to DNA but only emits at 450 nm when bound to RNA.

Assay Protocol

1. **Labeling of neurons:**
    1. Prepare a 1 to 10% solution of hydroxystilbamidine with saline.*
    2. Administer *via* intraperitoneal or intracerebroventricular injection.
2. **Tissue fixation:** Fix tissue using PBS containing 4% paraformaldehyde or other fixative of choice.**
3. **Optional counterstaining:** Fixed tissue sections containing hydroxystilbamidine may be further processed with secondary markers such as fluorescent counterstains, secondary retrograde tracers, autoradiographic probes, or antibodies for immunohistochemistry.
4. **Observe tissue sections using fluorescence microscopy:** Hydroxystilbamidine displays excitation/emission maxima of 323 and 620 nm, respectively.

**Note 1: The recommended starting concentration is 4% hydroxystilbamidine. If injection site necrosis occurs, or fluorescent labeling is too intense, reduce the concentration to 2%.*

***Note 2: Hydroxystilbamidine fluorescence is quenched by fixatives containing high concentrations of heavy metals, such as mercury or osmium. Background fluorescence may be increased in fixatives containing greater than 1% glutaraldehyde.*

References

1. Akhavan, M., Hoang, T.X., and Havton, L.A. *J. Neurosci. Methods* **152(1-2)**, 156-162 (2006).
2. Li, C., Marshall, C.T., Lu, C., *et al. Biotech. Histochem.* **81(1)**, 41-50 (2006).
3. Festy, B. and Daune, M. *Biochemistry* **12(24)**, 4827-4834 (1973).

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