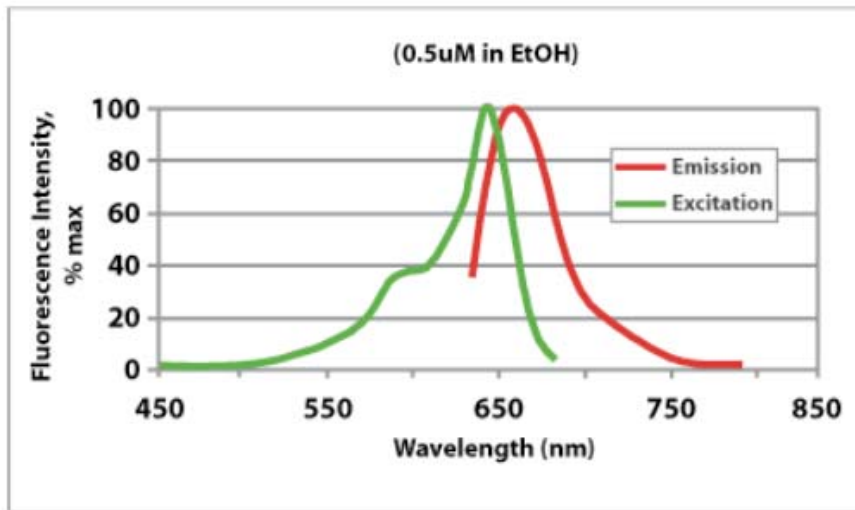


Catalog Number: FS-1001

Product Name: NeuroVue[®] Maroon Filter For Neuronal Tract Tracing

Product Description: 1 cm² nylon filter coated with the lipophilic far-red emitting dye, NeuroVue Maroon.
Typical dye loading: 11-14nmoles/mm²

Figure 1: Spectra of NeuroVue Maroon. (ex max = 647nm; em max = 667nm)



Storage/Stability: Store in the dark at room temperature.

Applications: NeuroVue Maroon has been found to be useful for tracing neuronal connections in animal tissues fixed in formaldehyde (1, 2, 4-12, 14, 16-21, 23-25). Like other lipophilic tracers (13, 15), it readily transfers into plasma membranes in fixed and/or live tissues and diffuses laterally within the membrane, eventually labeling the entire cell body as well as the finest axonal and dendritic branches, and allowing visualization of neuronal processes up to several millimeters distant from the point of dye insertion (1, 2, 4-12, 14, 16-21, 23-25).

NeuroVue Maroon is provided in coated filter format because insertion of small dye coated filter segments has been shown to be a simple, reliable method for labeling well defined tissue regions, avoiding known artifacts associated with labeling via high pressure microinjection or insertion of dye crystals on a dissecting needle (3, 13, 22). NeuroVue Maroon fluoresces in the far red (Figure 1) and exhibits minimal bleed through into filter windows typically used for visible fluorescing lipophilic tracers such as DiA, DiI, NeuroVue Red (cat. # FS-1002), NeuroVue Orange (cat. # FS-1003) or NeuroVue Jade (cat. # FS-1006), making it an excellent choice for multicolor neurotracing studies in sections and/or whole-mount preparations (1, 2, 4-12, 14, 16-21, 23-25)

Additional Important Information

- 1) Filter segments of the desired size and shape can be cut using super fine Vannas scissors (one possible supplier is World Precision Instruments, Sarasota, FL, cat #500086) and inserted into the tissue at the site to be labeled. Protocol NT 001 may be downloaded for further details.
- 2) Diffusion times vary depending on the biological system under study and must be determined empirically. See cited references and Protocol NT 001 for potentially important variables and possible starting conditions.
- 3) Detection of Labeled Cells
Note: Due to its very long red fluorescence emission, most people cannot see NeuroVue Maroon emission by eye. Detection by camera will be more sensitive than with the unaided eye
 - a) Confocal microscopy.
Detection is most efficient using the 633nm or 647nm laser line for excitation and emission filter set at 650-710nm
 - b) Epifluorescence microscopy:
Standard filter sets potentially useful for NeuroVue Maroon excitation and emission include
 - Cy5[®] (Chroma # 31023): exciter D640/20x , dichroic 660DCLP, emitter D680/30
 - Cy5[®] longpass emission (Chroma #41024), exciter HQ620/60x , dichroic Q660LP, emitter HQ665LPAlthough suboptimal, success has also been reported using a standard Texas Red filter set to detect NeuroVue Maroon.

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