

# NeuroVue® Burgundy Filter Square For Neuronal Tract Tracing

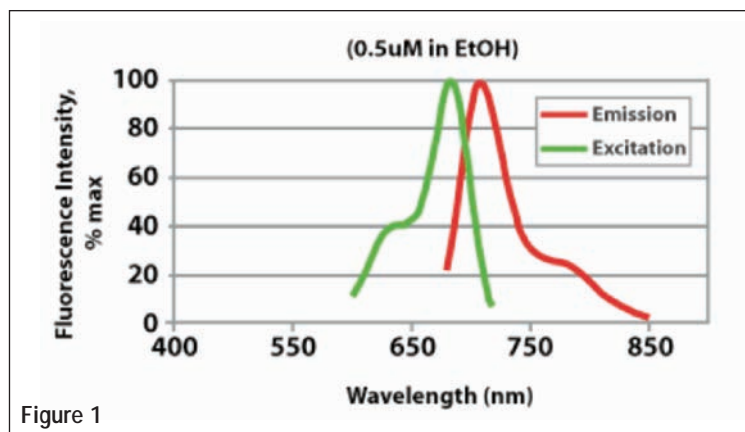
Catalog #24838

## Product Description

1 cm<sup>2</sup> nylon filter coated with the lipophilic far-red emitting dye, NeuroVue® Burgundy. Typical dye loading: 11-14nmoles/mm<sup>2</sup>.

Figure 1

Spectra of NeuroVue® Burgundy.  
(ex max = 683nm; em max = 707nm)



## Storage/Stability

Store in the dark at room temperature.

## Applications

NeuroVue® Burgundy has been found to be useful for tracing neuronal connections in animal tissues fixed in formaldehyde (*personal communication, Dr. Bernd Fritzschn, Creighton University*). Like other lipophilic tracers (1, 2), 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. Studies of up to 7 days can be performed in most cases without substantial transcellular diffusion.

NeuroVue® Burgundy 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 (1, 3, 4). NeuroVue® Burgundy 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. #24835), NeuroVue® Orange (Cat. #24836) or NeuroVue® Jade (Cat. #24837), making it an excellent choice for multicolor neurotracing studies in sections and/or whole-mount preparations. NeuroVue® Burgundy can also be used in combination with NeuroVue® Maroon using spectral unmixing techniques.

## Additional Important Information

- Filter segments of the desired size and shape can be cut using super fine Vannas scissors (Cat. #24839) and inserted into the tissue at the site to be labeled. Technical Data Sheet #770 may be downloaded for an in depth protocol.
- Diffusion times vary depending on the biological system under study and must be determined empirically. See cited references and Technical Data Sheet #770 for potentially important variables and possible starting conditions.
- Detection of Labeled Cells

**Note: Due to its very long red fluorescence emission, most people cannot see NeuroVue® Burgundy 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® Burgundy 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 HQ665LP

## References

- Honig M. 1993 Dil Labelling. *Neuroscience Protocols* 93-050-16-01-20
- Köbber C, Apps R, Bechmann I, Lanciego JL, Mey J, Thanos S. 2000. Current concepts of neuroanatomical tracing. *Progress in Neurobiology* 62: 327-351
- Fritzscht, B, Nichols DH, Echelard Y, McMahon AP. Development of midbrain and anterior hindbrain ocular motoneurons in normal and Wnt-1 knockout mice, *J Neurobiol.* 27:457-469 (1995).
- Rosa-Molinar E, Proskocil BJ, Ettl M and Fritzscht B. Whole-mount procedures for simultaneous visualization of nerves, neurons, cartilage and bone. *Brain Res. Protoc.* 4, 115-123 (1999).

## Ordering Information

Cat. #	Description	Size
24838	NeuroVue® Burgundy Filter Square For Neuronal Tract Tracing	1 filter

## Additional Products

24834	NeuroVue® Maroon Filter Square For Neuronal Tract Tracing	1 filter
24835	NeuroVue® Red Filter Square For Neuronal Tract Tracing	1 filter
24836	NeuroVue® Orange Filter Square For Neuronal Tract Tracing	1 filter
24837	NeuroVue® Jade Filter Square For Neuronal Tract Tracing	1 filter
24839	Vannas scissors, super fine	1 pair

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