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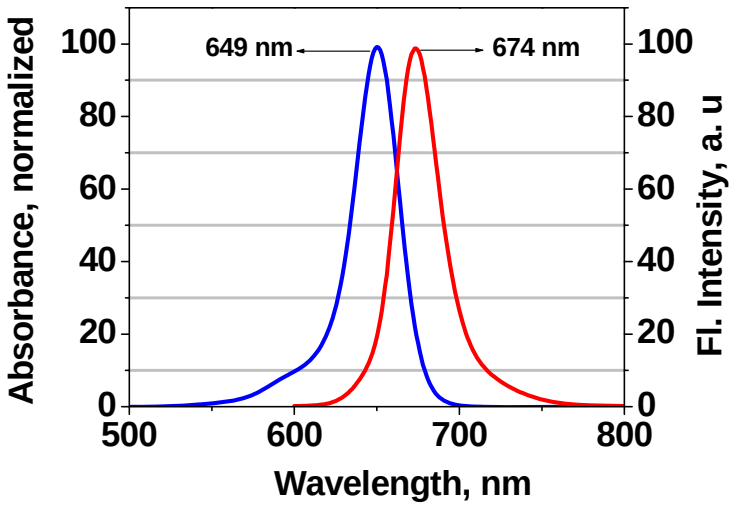
Catalog Number: SR-1006

Product Name: SRfluor® 680 azide

Product Description: A far-red emitting dye (Figure 1), belonging to the squaraine rotaxane family of dyes, which bears a free terminal azide group that can undergo click reactions with alkynes.

Figure 1: Spectra of SRfluor®-680 azide. (absorption maxima = 649 nm; emission maxima = 674 nm)



Product size: 1 mg of crystalline dark blue powder.

Molecular Weight: 1026.1

Product Purity: > 90% by HPLC

Extinction Coefficient (DMSO): ~200,900 $cm^{-1}M^{-1}$ (649 nm).

Storage/Stability: Solid as well as stock solutions in DMSO should be stored in the dark at -10 to 0°C.

Applications:
SRfluor®- dyes has been found to be 5-20X brighter compared with cyanines, Alexa® and ATTO® dyes and also to have improved chemical and photochemical stability (1-3). It can be coupled to peptides, proteins and antibodies, etc., to provide fluorescent conjugates for use in Western-Blots and *in vivo* imaging studies.

Additional Information:

- 1mg of SRfluor®-680 azide can be dissolved in 0.97 mL of DMSO to provide a 1mM stock solution by gentle heating and sonication.
- SRfluor® 680 azide can be efficiently excited with either 633nm or 647nm laser lines and detected using a standard filter set-up for Cy5.

References:

(1) Johnson, J. R.; Fu, N.; Arunkumar, E.; Leevy, W. M.; Gammon, S. T.; Piwinica-Worms, D.; Smith, B. D. Squaraine Rotaxanes: Superior Substitutes for Cy-5 in Molecular Probes for Near-Infrared Fluorescence Cell Imaging *Angew. Chem. Int. Ed*. **2007**, *46*, 5528.

(2) Arunkumar, E.; Fu, N.; Smith, B. D. Squaraine-Derived Rotaxanes: Highly Stable, Fluorescent Near-IR Dyes. *Chem.-Eur. J*. **2006**, *12*, 4684.

(3) Arunkumar, E; Forbes, C. C.; Noll, B. C.; Smith B. D. Squaraine-Derived Rotaxanes: Sterically Protected Fluorescent Near-IR Dyes *J. Am. Chem. Soc*. **2005**, *127*, 3288.