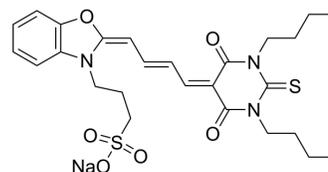


Merocyanin 540

Cat. No.:	HY-D0127
CAS No.:	62796-23-0
Molecular Formula:	C ₂₆ H ₃₂ N ₃ NaO ₆ S ₂
Molecular Weight:	569.67
Target:	Fluorescent Dye
Pathway:	Others
Storage:	4°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (219.43 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	1.7554 mL	8.7770 mL	17.5540 mL
5 mM	0.3511 mL	1.7554 mL	3.5108 mL
10 mM	0.1755 mL	0.8777 mL	1.7554 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Merocyanin 540 is a fluorescent membrane probe that selectively stains the membranes of a wide variety of electrically excitable cells, but not those of nonexcitable cells (Ex/Em: 540/580 nm)^{[1][2]}.

In Vitro

Guidelines^[1] (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).

Labeling of Cells:

1. Wash monolayer cultured cells with isotonic saline with or without 1-5 mM CaCl₂ or iso-osmotic sucrose (0.25 M) solutions buffered with 5 mM Tris-Cl (pH 7.4).
2. Expose cells to Merocyanin 540 (1.6 x 10⁻⁵ M) in the appropriate buffer for 10 min at room temperature under ambient lighting conditions.
3. Wash extensively and examine by fluorescence microscopy.
4. For protozoa, place 0.05 mL aliquots of washed cultures containing 100-200 organisms on a microscope slide.
5. Add Merocyanin 540 to a final concentration of 1.0-10 µg/mL.
6. Examine cells by fluorescence microscopy.
7. Incubate single cell suspensions or tissue slices with Merocyanin 540 (1.75-5.25 x 10⁻⁵ M) and examine by fluorescence microscopy as described for attached cells.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Easton TG, et al. Merocyanine 540 as a fluorescent probe of membranes: staining of electrically excitable cells. *Cell*. 1978 Mar;13(3):475-86.
- [2]. Lagerberg JW, et al. Factors affecting the amount and the mode of merocyanine 540 binding to the membrane of human erythrocytes. A comparison with the binding to leukemia cells. *Biochim Biophys Acta*. 1995 May 4;1235(2):428-36.
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Caution: Product has not been fully validated for medical applications. For research use only.

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