

Membrane Green Probe (AIE)

A1456412

Storage at -20°C (12 months). Avoid freeze/thaw cycle. Protect from light.

Introduction:

Membrane Green Probe (AIE) is a tetraphenylethylene-based cell membrane probe developed based on the AIE principle. It has typical AIE characteristics. The product only needs to be simply incubated with cells to label the cell membrane.

Product Characteristics:

Membrane Green Probe (AIE) has excellent aggregation-induced emission properties and can specifically label the cell membranes of various cells. Before and after binding to the cell membrane, due to changes in the aggregation state, its fluorescence intensity will undergo extremely obvious changes, while the fluorescent probes that do not bind to the cell membrane basically do not emit fluorescent signals.

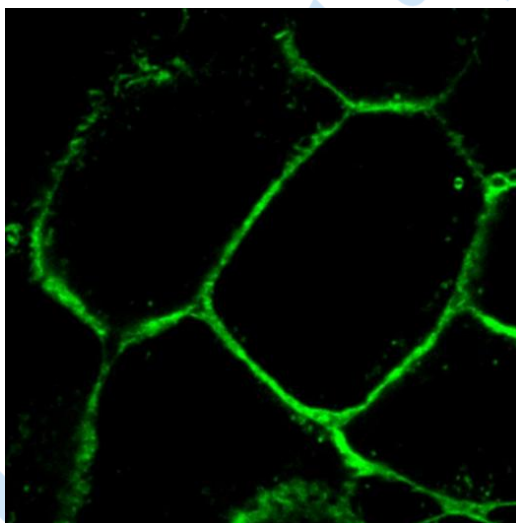



Figure 1. Laser confocal imaging effect diagram on HeLa cells

Different from common dyes, Membrane Green Probe (AIE) can be excited by a 405 nm excitation wavelength, and has a large Stokes shift, which can clearly distinguish it from other dyes, reducing the possibility of crosstalk in imaging. At the same time, Membrane Green Probe (AIE) has good biocompatibility and high imaging concentration, and can still ensure stable fluorescence signal output in the state of multiple scans, making it very suitable for multiple imaging.

Product Properties :

Product Properties	Details
Formula	C ₄₄ H ₃₉ IN ₂ O ₂
Molecular Weight	754.71 g/mol
Purity	> 98% (HPLC)
Working Concentration	5 - 10 μM
Full width at half maximum	560 nm - 700 nm
Maximum absorption/emission wavelength (nm)	λ _{abs} = 370 nm / Em = 675 nm

Product Advantages:

1. Relatively low cytotoxicity, suitable for live cell imaging.
2. Good photostability and strong anti-photobleaching ability.
3. Low background noise, no need for washing, enabling rapid imaging. 

Experimental Methods:

1. Preparation of stock dye solution: Appropriately aliquot the stock dye solution and store it in the dark at -20°C or lower. The concentration of the stock solution is 10 mM.
2. Preparation of working dye solution: Take 1 μL of Membrane Green Probe (AIE) stock solution and add it to 1-2 mL of cell culture medium or an appropriate buffer solution (such as PBS) to obtain an Membrane Green Probe (AIE) working solution with a final concentration of 5-10 μM.
3. Cell staining: Incubate adherent cells with an appropriate amount of the working solution for 10-15 minutes (preferably in a cell culture incubator). Observe with a confocal fluorescence microscope or a fluorescence microscope. Set the excitation wavelength to 405 nm and collect signals at 540-590 nm.

Matters needing attention:

1. Centrifuge briefly before use. It is recommended to observe within one hour after staining.
2. When using for the first time, prepare the mother solution first, aliquot it, and store at -20°C to avoid repeated freezing and thawing.
3. For your safety and health, please wear a lab coat and disposable gloves.
4. This product is only for scientific research use.