

Cell Nuclear Green Probe (Aggregation-induced emission, AIE)

C1375494

Storage: -20°C. Avoid freeze/thaw cycle. Store in the dark.

Introduction:

AIE Cell Nuclear Green Probe is a triphenylamine derivative developed based on the AIE principle, with typical AIE characteristics.

Product Characteristics: AIE Cell Nuclear Green Probe has excellent aggregation-induced emission properties and can specifically label the nuclear structures of various fixed cells. Due to the change in aggregation state before and after binding to the nucleus, its fluorescence intensity undergoes extremely significant changes, while the fluorescent probe that does not bind to the nucleus basically does not emit fluorescent signals.

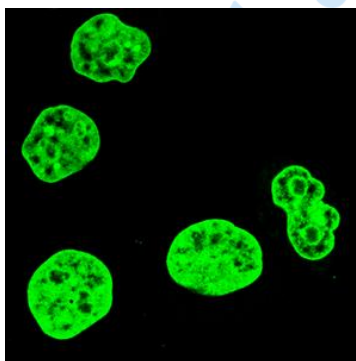


Figure 1. Laser confocal imaging effect diagram on LO2 cells

Different from common dyes, the AIE nuclear green probe has a large Stokes shift, which can be clearly distinguished from other dyes and reduce the possibility of crosstalk in imaging. At the same time, the AIE nuclear green probe has good biocompatibility and high imaging concentration, and can ensure stable fluorescence signal output under multiple scanning conditions, making it very suitable for multiple imaging.

Product Properties

Formula	$C_{33}H_{30}N_4O_2^{2+}$
Molecular Weight	513.64 g/mol
Purity	≥98% (HPLC)
Working Concentration	1- 10 μ M
Excitation Wavelength	405 nm
Emission Wavelength	500 - 600 nm

Product Advantages:

1. Strong anti - photobleaching ability. After 40 times of laser scanning totaling 15 minutes, the emission fluorescence intensity remains unchanged.
2. Low background noise and fast imaging.

Usage method:

1. Preparation of Dye Stock Solution: Centrifuge briefly. Add 80 μL of high-quality anhydrous DMSO to one tube of AIE nuclear green probe solution. Pipette and mix evenly to obtain an AIE nuclear green probe stock solution with a concentration of 10 mM. After appropriate sub-packaging, store in the dark at - 20 $^{\circ}\text{C}$ or a lower temperature.
2. Preparation of Dye Working Solution: Take 1 μL of the AIE nuclear green probe stock solution and add it to 1 - 10 mL of cell culture medium or an appropriate buffer (such as PBS) to obtain an AIE nuclear green probe working solution with a final concentration of 1 - 10 μM .
3. Cell Staining: After cell fixation, incubate the cells with an appropriate amount of the working staining solution for 5-10 min. Wash with PBS. Observe with a confocal fluorescence microscope or a fluorescence microscope. Set the excitation wavelength to 405 nm and collect signals at 500 - 600 nm.

Precautions:

1. Please centrifuge briefly before use.
2. Store at -20 $^{\circ}\text{C}$ and avoid repeated freezing and thawing.
3. For your safety and health, please wear a lab coat and disposable gloves during operation.
4. This product is only for scientific research use.