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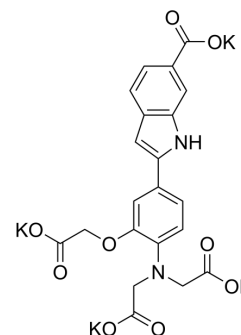
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Mag-Indo-1 tetrapotassium salt

Cat. No.:	HY-W127843
CAS No.:	132299-21-9
Molecular Formula:	C ₂₁ H ₁₄ K ₄ N ₂ O ₉
Molecular Weight:	594.74
Target:	Fluorescent Dye
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Mag-Indo-1 tetrapotassium salt is a cell impermeable fluorescent probe for Mg ²⁺ detection ^[1] .
In Vitro	<p>Mag-Indo-1 tetrapotassium salt can be used to determine the free Mg²⁺ concentration in the cytoplasmic solutions^[1]. Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs)^[1].</p> <ol style="list-style-type: none"> 1. Calibrating solutions containing various concentrations of Mg²⁺ are prepared by mixing different ratios of the two stock solutions: one contains (mM) 150 KCl, 0.1 EGTA and 5 Hepes (pH 7.2 with KOH), and the other contains 100 MgCl₂, 0.1 EGTA and 5 Hepes (pH 7.2 with KOH). 2. The calibration curve is constructed using calibrating solutions containing 1 μM Mag-Indo-1 tetrapotassium salt. 3. The 'Mg²⁺' calibrating solution contained (mM): 130 KCl, 4 EDTA and 5 Hepes (pH 7.2 with KOH). 4. The relationship between the background-corrected value of the fluorescence ratio (R) and the Mg²⁺ concentration is fitted with the following theoretical equation. $[Mg] = K (R - R_{min}) / (R_{max} - R)$, where [Mg] is the concentration of free Mg²⁺ ion, R_{min} is the R value at 0 [Mg²⁺], and R_{max} is the R value at saturating Mg²⁺. The curve fitting gave R_{min} = 0.053, R_{max} = 1.57, and K = 5.1 mM. <p>Note: the specific curve can refer to the reference. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

[1]. Ding-Hong Yan, et al. Two Kir2.1 channel populations with different sensitivities to Mg(2+) and polyamine block: a model for the cardiac strong inward rectifier K(+) channel. J Physiol. 2005 Mar 15;563(Pt 3):725-44.

Caution: Product has not been fully validated for medical applications. For research use only.

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