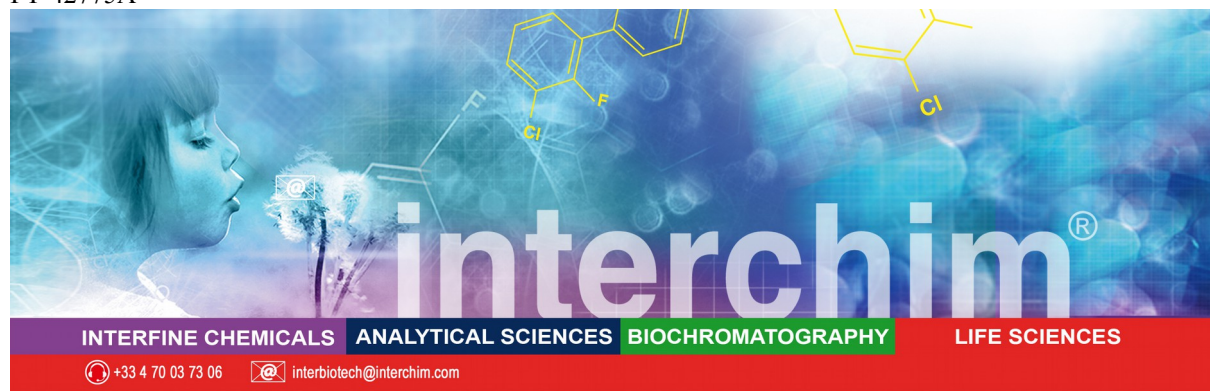


FT-42775A



INDO-1

Product Information

Name :	INDO-1, AM ester
Catalog Number :	FP-427755 , 1mg FP-427757, 1mg Pure Grade FP-42775A, 20x50 µg
Structure :	C ₄₇ H ₅₁ N ₃ O ₂₂
Molecular Weight :	MW= 1009,91
Soluble:	Soluble in DMSO
Absorption / Emission :	$\lambda_{exc} \backslash \lambda_{em}$ (no Ca ²⁺) = 349 / 475 nm $\lambda_{exc} \backslash \lambda_{em}$ (high Ca ²⁺) = 330 / 400 nm.
Extinction Coefficient	ϵ (363nm, no Ca ²⁺) = 33 000 M ⁻¹ cm ⁻¹ ϵ (335nm, high Ca ²⁺) = 33 000 M ⁻¹ cm ⁻¹ .
K_d :	250 nM

Name :	INDO-1, pentapotassium salt
Catalog Number :	FP-42774A - 1mg
Structure :	C ₃₂ H ₂₆ K ₅ N ₃ O ₁₂ .
Molecular Weight :	MW= 840
Soluble:	Soluble in DMSO ; in water (pH>6)
Absorption / Emission :	$\lambda_{exc} \backslash \lambda_{em}$ (no Ca ²⁺) = 349 / 475 nm $\lambda_{exc} \backslash \lambda_{em}$ (high Ca ²⁺) = 330 / 400 nm.
Extinction Coefficient	ϵ (363nm, no Ca ²⁺) = 33 000 M ⁻¹ cm ⁻¹ ϵ (335nm, high Ca ²⁺) = 33 000 M ⁻¹ cm ⁻¹ .
K_d :	250 nM

Name :	INDO-1, Na salt
Catalog Number :	FP-31603A - 1mg
Structure :	C ₃₂ H ₂₆ Na ₅ N ₃ O ₁₂ .
Molecular Weight :	MW= 759.53
Soluble:	Soluble in buffer (pH>6)
Absorption / Emission :	$\lambda_{exc} \backslash \lambda_{em}$ (no Ca ²⁺) = 349 / 475 nm $\lambda_{exc} \backslash \lambda_{em}$ (high Ca ²⁺) = 330 / 400 nm.

FT-42775A

Name :	INDO-1, NH₄ salt
Catalog Number :	FP-AM293A , 1mg
Structure :	C ₃₂ H ₄₆ N ₈ O ₁₂ .
Molecular Weight :	MW= 734.77
Soluble:	Soluble in buffer (pH>6)
Absorption / Emission :	$\lambda_{\text{exc}} \backslash \lambda_{\text{em}}$ (no Ca ²⁺) = 349 / 475 nm $\lambda_{\text{exc}} \backslash \lambda_{\text{em}}$ (high Ca ²⁺) = 330 / 400 nm.

Storage: **Indicator salts** can be stored desiccated and protected from light at room temperature, +4°C or -20°C >1 year. (M)
AM esters can be stored desiccated and protected from light at -20°C > 6 months. (M)

Introduction

Similar to fura-2, indo-1 is also a UV-excitable fluorescent Ca²⁺ sensor. However, different from fura-2, the fluorescent emission maximum undergoes a large blue shift from 482 nm to 398 nm upon Ca²⁺ binding. Thus, Ca²⁺ concentration can be determined by ratioing the fluorescence intensities at the two wavelengths. As with fura-2, this ratioing the fluorescence intensities at the two wavelengths. As with fura-2, this ratioing technique avoids problems associated with uneven dye distribution, cell or tissue thickness and photobleaching. Indo-1 has been widely used in flow cytometry studies.

Indo-1, AM ester is a membrane-permeant form and thus can be loaded into cells via incubation. Because of the relatively low water solubility of the AM ester, Pluronic® F-127 a mild detergent, is often used as a dispersing agent to facilitate the loading. Indo-1 AM itself does not bind Ca²⁺, but it is readily hydrolyzed to indo-1 by endogenous esterases once the dye is inside the cells.

Indo-1, pentapotassium salt is membrane-impermeant but can be loaded into cells via microinjection or scrape loading.

Directions for use

Handling and Storage

Stock solutions of the salts may be prepared in distilled water or aqueous buffers (pH>6) and stored at +4°C protected from light. They may be loaded into cells via microinjection, addition to patch pipette solutions, scrape loading, or by pinocytose.

AM esters should be reconstituted in anhydrous dimethylsulfoxide (DMSO) then used as soon as possible thereafter (within a week) to avoid hydrolysis with subsequent loss of cell loading capacity. DMSO stock solutions of AM esters should be frozen and desiccated and protect from light.

Protocol may be found in the literature.

Related products

- Indo-1FF, [FP-AM628A](#)

References

- **Grynkiewicz G., et al.**, "A new generation of Ca²⁺ indicators with greatly improved fluorescence properties", *J. Biol. Chem.*, **260**, 3340 (1985) [Article](#)
- *Circulation Res.* **69**, 46 (1991);
- **Stefenelli T., et al.**, "Calcium-dependent fluorescence transients during ventricular fibrillation.", *Am Heart J.*, **120**, 590 (1990) [Abstract](#)



FT-42775A

- **Wahl, M, et al.**, "Intracellular Ca²⁺ measurement using Indo-1 in substrate-attached cells: advantages and special considerations." *Cell Calcium*, **11**, 487 (1990) [[Abstract](#)]

Ordering information

Catalog size quantities and prices may be found at <http://www.interchim.com>

Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : FluoProbes / Interchim; Hotline : +33(0)4 70 03 73 06

Disclaimer : Materials from FluoProbes® are sold **for research use only**, and are not intended for food, drug, household, or cosmetic use. FluoProbes® is not liable for any damage resulting from handling or contact with this product.

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