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Indo-1, Pentapotassium Salt

Membrane-impermeant calcium indicator that can be loaded into cells via microinjection or scrape loading.



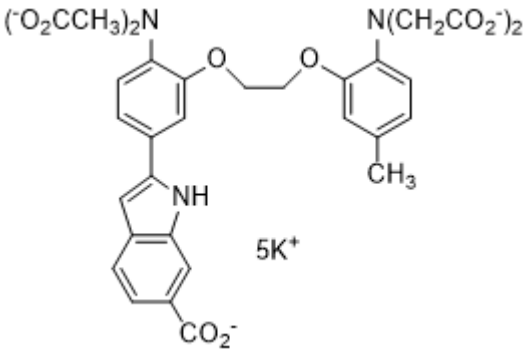
Product attributes

CAS number	132319-56-3
Cell permeability	Membrane impermeant
Indicator type	Ratiometric
Excitation/Emission	349/482 nm (no Ca2+); 331/398 nm (high Ca2+)

Product Description

Membrane-impermeant calcium indicator that can be loaded into cells via microinjection or scrape loading. We also offer membrane-permeant Indo-1, AM Ester.

- K_d: 250 nM
- λEx/λEm (no Ca^{2+}) = 349/482 nm
- λEx/λEm (high Ca^{2+}) = 331/398 nm
- ε (349 nm, no Ca^{2+}) = 33,000 $M^{-1}cm^{-1}$
- Light yellow solid soluble in DMSO
- Store at 4 °C and protect from light, especially in solution
- $C_{32}H_{26}K_5N_3O_{12}$
- MW: 840
- [132319-56-3]



BAPTA-based ion indicators like Indo-1 have been shown to be fixable in situ by EDC/EDAC (cat# 59002). The fixation of indicator dyes is useful for downstream immunofluorescence and IHC studies (Cell Calcium 1997, 21(3), 175).

As the indicator does not covalently bind to cellular components, it may be actively effluxed from the cell by organic anion transporters. The rate of efflux increases with temperature, and may vary between cell types, resulting in variable retention times of a few minutes to hours. Experiments using indicators in cells usually are performed within one or two hours of loading, but it may be possible to re-load cells with indicator if needed. The organic anion transporter inhibitor Probenecid (#50027) can be used to slow the rate of indicator efflux from cells.

References

1. Methods Cell Biol, 99, 113, (2021), DOI: 10.1016/B978-0-12-374841-6.00005-0

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