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Fluo-3, Pentaammonium Salt

Fluo-3, pentaammonium is membrane-impermeant, but can be loaded into cells via microinjection or scrape loading.



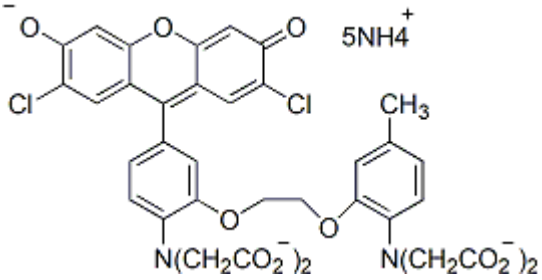
Product attributes

CAS number	134907-84-9
Cell permeability	Membrane impermeant
Indicator type	Non-ratiometric
Excitation/Emission	506/526 nm

Product Description

Fluo-3, pentaammonium is membrane-impermeant, but can be loaded into cells via microinjection or scrape loading.

- K_d: 450 nM
- $\lambda_{Ex}/\lambda_{Em}$ (low or high [Ca^{2+}]) = 506/526 nm
- ε (506 nm) = 86,000 $M^{-1}cm^{-1}$
- Orange red solid soluble in DMSO and water (pH >6)
- Store at 4 °C and protect from light, especially when in solution
- $C_{36}H_{25}Cl_2N_7O_{13}$
- MW: 854.7
- [134907-84-9]



BAPTA-based ion indicators like Fluo-3 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. Cell Calcium 13, 29 (1992), DOI: 10.1016/0143-4160(92)90027-P
2. Biochem J 269, 513 (1990), DOI: 10.1042/bj2690513
3. Biochem Biophys Res Comm 171, 102 (1990), DOI: 10.1016/0006-291X(90)91362-V
4. Methods Cell Biol 99, 113, (2021), DOI: 10.1016/B978-0-12-374841-6.00005-0

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