

Rhod-2, Triammonium salt

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



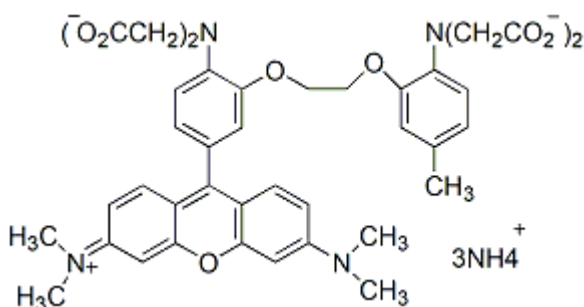
Product attributes

CAS number	129787-65-1
Cell permeability	Membrane impermeant
Indicator type	Non-ratiometric
Excitation/Emission	556/576 nm

Product Description

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

- K_d : 1 μ M
- $\lambda_{Ex}/\lambda_{Em}$ (low or high $[Ca^{2+}]$) = 556/576 nm
- ϵ (556 nm) = 80,000 $M^{-1}cm^{-1}$
- Orange red solid soluble in DMSO and water (pH >6)
- Store at 4 °C and protect from light, especially in solution
- $C_{40}H_{51}N_7O_{11}$
- MW: 806



BAPTA-based ion indicators like Rhod-2 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. Biophys J, 59, 12 (1991), [DOI: 10.1016/S0006-3495\(91\)82193-2](#)
2. Science 250, 977 (1990), [DOI: 10.1126/science.2237441](#)
3. J Biol Chem 264, 8171 (1989), [DOI: 10.1016/S0021-9258\(18\)83165-9](#)
4. Methods Cell Biol, 99, 113, (2021), [DOI: 10.1016/B978-0-12-374841-6.00005-0](#)