SPQ

The fluorescence of SPQ is specifically quenched by chloride via collision. Therefore, chloride concentration is measured by monitoring the degree of fluorescence decrease.

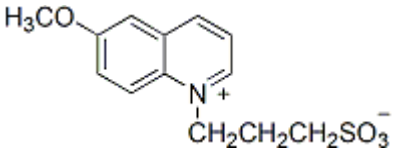
Product attributes

CAS number	83907-40-8
Cell permeability	Membrane impermeant
Colors	Blue
Excitation/Emission	344/443 nm

Product Description

The fluorescence of SPQ is specifically quenched by chloride via collision. Therefore, chloride concentration is measured by monitoring the degree of fluorescence decrease. The dye can be loaded into cells by hypotonic shock.

- White solid soluble in H_2O and DMSO
- Store at 4 °C. Protect from light, especially in solution.
- $\lambda_{Ex}/\lambda_{Em}$= 344/443 nm
- ε (344 nm, H_2O) = 3,700
- $C_{15}H_{15}NO_4S$
- MW: 281
- [83907-40-8]



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

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3. J Biol Chem, 266, 20590 (1991), DOI: 10.1016/S0021-9258(18)54749-9
4. Methods Cell Biol, 99, 113, (2021), DOI: 10.1016/B978-0-12-374841-6.00005-0