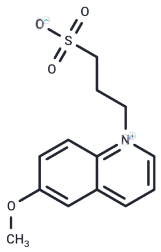
Data Sheet (Cat.No.T19060)

TargetMol

SPQ

Chemical Properties



CAS No. : 83907-40-8

Formula: C13H15NO4S

Molecular Weight: 281.33

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	SPQ is used to measure membrane chloride transport mechanisms.
Targets(IC50)	Others
Cell Research	Instructions a. Solution preparation: 1. Preparation of SPQ stock solution: Dissolve SPQ powder in water or buffer to prepare a stock solution of at least 1 mg/mL. For example, weigh 10 mg of SPQ and add it to 10 mL of water or buffer. 2. Preparation of working solution: Dilute SPQ stock solution with Krebs-HEPES buffer (20 mM HEPES, 128 mM NaCl, 2.5 mM KCl, 2.7 mM CaCl2, 1 mM MgCl2, 16 mM glucose, pH 7.4) to prepare a 5-10 μM working solution for later use. Note: The stock solution needs to be stored at -20℃ or -80℃. Please avoid repeated freezing and thawing. The diluted working solution should be prepared and used as soon as possible. b. Operation steps: 1. Cultivate the cells to be tested to an appropriate density, about 8-10×10^6 cells/mL. 2. Wash the cells 3 times with Krebs-HEPES buffer. 3. Add 5-10 μM SPQ in Krebs-HEPES buffer to the cells and incubate at 37°C for 1 hour. 4. Wash the cells 5 times with Krebs-HEPES buffer to remove the residual dye outside the cells. 5. Observe the cells using a fluorescence microscope with an excitation wavelength of 344 nm and an emission wavelength of 443 nm. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	H2O: 20 mg/mL (71.09 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5545 mL	17.7727 mL	35.5454 mL
5 mM	0.7109 mL	3.5545 mL	7.1091 mL
10 mM	0.3555 mL	1.7773 mL	3.5545 mL
50 mM	0.0711 mL	0.3555 mL	0.7109 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Engblom AC, et al. Determination of GABA receptor-linked Cl- fluxes in rat cerebellar granule cells using a fluorescent probe SPQ. Neurosci Lett. 1989 Oct 9;104(3):326-30.