

Zinquin AM *UltraPure grade*

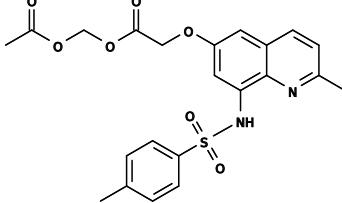
Catalog Number: 21261

Unit Size: 1 mg

Product Details

Storage Conditions	Freeze (< -15 °C), Minimize light exposure
Expiration Date	12 months upon receiving

Chemical Properties

Appearance	Solid off-white
Molecular Weight	458.48
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	355 nm
Emission Wavelength	491 nm

Applications

Zinquin AM ester is a lipophilic, zinc-sensitive, cell-permeable fluorescent probe. It is retained in living cells because the AM ester is cleaved by cytosolic esterase to give Zinquin that carry a negative charge, preventing its efflux across the plasma membrane. Zinquin fluorescent probes may be loaded into cells by in the culture medium containing 5-40 µM Zinquin ethyl ester in PBS with calcium and magnesium (or in culture medium). Cells are normally incubated with the Zinquin ethyl ester for 15-30 minutes at 37 °C. Exact loading concentration, time and temperature depend on the purpose of the experiment and cell type, and so will need to be optimized experimentally. Cells are washed in PBS with culture medium to remove extracellular remaining dye. Cells are observed under microscope or used for confocal microscopy, FACS or spectrofluorimetry analysis. Zinc is the second most abundant transition metal in the body and it is essential as catalytic, structural and regulatory ion. Zinc ions are involved in homeostasis, immune responses, oxidative stress, apoptosis and aging. Zinc has been proposed to function as a conventional neurotransmitter for the presynaptic neuron and as a transmembrane signal to traverse the postsynaptic neuron. Aberrant zinc metabolism is associated with many neurological diseases including Alzheimer's disease, Parkinson's disease and epilepsy. The most suitable technique for in vivo monitoring of zinc has been proven to be fluorescence imaging.