Cal-520ER™ potassium salt

Catalog Number: 21148
Unit Size: 10x50 ug

Product Details

Storage Conditions	Freeze (< -15 °C), Minimize light exposure
Expiration Date	24 months upon receiving

Chemical Properties

Appearance	Solid orange
Molecular Weight	1002.06
Soluble In	Water

Spectral Properties

Excitation Wavelength	492 nm
Emission Wavelength	515 nm

Applications

Cal-520ER™ has been designed to monitor the change of calcium ion (Ca2+) in the endoplasmic reticulum (ER). Cal-520ER™ potassium salt is not cell permeable. The importance of calcium signaling in cell health and disease is the major driving force in current research of intracellular calcium homeostasis. Ca2+ release from ER and other calcium stores seems to be the crucial factor in the activation of many cellular functions. Significant changes in ER Ca2+ content and dynamics have been implicated in the activation of the ER stress response, abnormal autophagy, and cell death which leads to a variety of pathological conditions. Cal-520ER is a low-affinity Ca2+ indicator that can be used to record fast Ca2+ signals and to measure the kinetics of Ca2+ currents. Compared to Oregon Green BAPTA-5N and to Fluo4FF, Cal-520ER offers a superior signal-to-noise ratio providing the optimal characteristics for this important type of biophysical measurement. This ability is the result of a relatively high fluorescence at zero Ca2+, necessary to detect enough photons at short exposure windows, and a high dynamic range leading to large fluorescence transients associated with short Ca2+ influx periods.