
Product Information Sheet

Ordering Information

Product Number: 20457

Product Name: Cal-670™-Dextran Conjugate *MW 10,000*

Unit Size: 1 mg

Storage Conditions: Freeze (<-15 °C), Desiccated, Avoid Light

Expiration Date: 12 months upon receiving

Chemical and Spectral Properties

Appearance: Solid

Molecular Weight: ~12000

Soluble In: Water

Excitation Wavelength: 650

Emission Wavelength: 675

Application Notes

Calcium measurement is critical for numerous biological investigations. Fluorescent probes that show spectral responses upon binding calcium have enabled researchers to investigate changes in intracellular free calcium concentrations by using fluorescence microscopy, flow cytometry, fluorescence spectroscopy and fluorescence microplate readers. Cells may be physically loaded with the cell-impermeant salt forms of these dextran-conjugated calcium indicators using patch pipette or microinjection. The fluorescence signal from these cells is measured using fluorescence microscopy. The dextran forms of our calcium indicators show a dramatic reduction in both leakage and compartmentalization compared to the AM ester forms. Among the fluorescent red calcium indicator dextran conjugates, Cal-670 dextran conjugates might be a better choice than other red fluorescent dextran conjugates due to its longer fluorescence wavelength optimized for in vivo imaging. Cal-670™ is a near infrared (NIR) calcium indicator with maximum emission at ~675 nm. It can be well excited with the red lasers at 633 nm or 647 nm. Cal-670™ is one of the very few calcium indicators that can be potentially used for in vivo imaging since it has a NIR fluorescence.