

**RatioWorks™ Cal-520®/zFluor 647™
-Dextran Conjugate *MW 10,000***Catalog number: 20604
Unit size: 1 mg**Product Details**

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

Chemical Properties

Appearance	Solid
Molecular Weight	~12000
Soluble In	Water

Applications

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 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 calcium indicator dextran conjugates, Cal-520 dextran conjugates might be the best choice due to their high fluorescence quantum yield and large fluorescence enhancement by calcium. RatioWorks™ Cal-520®/zFluor 647™-Dextran Conjugate carries a calcium-independent iFluor 647 fluorophore as a reference color for radiometric measurements. The Cal-520 fluorophore can be well excited by Argon laser at 488 nm where iFluor 647 has minimal excitation. The reference iFluor 647 fluorophore can be well excited by He-Ne laser at 633 nm or red laser at 647 nm where Cal-520 fluorophore has minimal excitation. This Cal-520 dextran exhibits high affinity to calcium ion than Cal-520L dextran (#20603), and optimized for monitoring low level calcium ion.