
Product Information Sheet

Ordering Information

Product Number:	20603
Product Name:	RatioWorks™ Cal-520L®/Cy5-Dextran Conjugate *MW 10,000*
Unit Size:	1 mg
Storage Conditions:	Freeze (<-15 °C), Minimize light exposure
Expiration Date:	12 months upon receiving

Chemical and Spectral Properties

Appearance:	Solid
Molecular Weight:	~12000
Soluble In:	N/A
Excitation Wavelength:	N/A
Emission Wavelength:	N/A

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 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. This Cal-520L dextran exhibits low affinity to calcium ion than Cal-520 dextran, and optimized for monitoring high level calcium ion. RatioWorks™ Cal-520L®/Cy5-Dextran Conjugate carries a calcium-independent Cy5 fluorophore as a reference color for radiometric measurements. The Cal-520L fluorophore can be well excited by Argon laser at 488 nm where Cy5 has minimal excitation. The reference Cy5 fluorophore can be well excited by He-Ne laser at 633 nm where Cal-520L fluorophore has minimal excitation.