
Product Information Sheet

Ordering Information

Product Number: 21214
Product Name: RatioWorks™ PH165, NHS ester
Unit Size: 1 mg
Storage Conditions:
Expiration Date: 12 months upon receiving

Chemical and Spectral Properties

Appearance: Solid
Molecular Weight: 595.53
Soluble In: DMSO
Excitation Wavelength: 463
Emission Wavelength: 641

Application Notes

RatioWorks™ PH165 NHS ester is a novel fluorescent probe that can be used to measure intracellular pH in live cells. It shows pH-dependent fluorescence spectra. Its dual excitation and dual emission make it a unique ratiometric pH probe for analyzing live cells. At low pH, RatioWorks™ PH165 is weakly fluorescent in far red spectrum region and highly fluorescent in red spectrum region. As pH increases, it shows higher fluorescence in far red spectrum and lower fluorescence in red spectrum. This probe can quantify cytosolic pH in the range from 4 to 9 with dual excitation/emission at 497/594 nm and 578/654 nm respectively. The pKa of PH165 is ~7.1. The red fluorescence spectrum of RatioWorks™ PH165 makes it suitable for multiplexing tests with green fluorophores such as GFP. The amine-reactive RatioWorks™ PH165 NHS ester is an excellent building block for developing novel ratiometric fluorescent probes of a variety of biological applications that require the precise pH determinations with the minimal effect of pH probe concentration change.