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Product Information Sheet

Ordering Information

Product Number:	21200
Product Name:	CytoFix™ BCECF, AM *Optimized for long term cellular pH tracking*
Unit Size:	1 mg
Storage Conditions:	
Expiration Date:	12 months upon receiving

Chemical and Spectral Properties

Appearance:	Solid
Molecular Weight:	638.63
Soluble In:	DMSO
Excitation Wavelength:	503
Emission Wavelength:	526

Application Notes

Intracellular pH plays an important modulating role in many cellular events, including cell growth, calcium regulation, enzymatic activity, receptor-mediated signal transduction, ion transport, endocytosis, chemotaxis, cell adhesion and other cellular processes. pH-sensitive fluorescent dyes have been widely applied to monitor changes in intracellular pH in recent years. Imaging techniques that use fluorescent pH indicators also allow researchers to investigate these processes with much greater spatial resolution and sampling density that can be achieved using other technologies such as microelectrode. Among them, 2',7'-bis-(2-carboxyethyl)-5-(and-6)-carboxyfluorescein (BCECF) is the most popular pH probe since it can be used to monitor cellular pH ratiometrically with pKa ~7.0. BCECF AM is the cell-permeable version of BCECF. However, BCECF rapidly leaks out of lives cell when BCECF is loaded into live cells through its AM ester due to the activities of drug efflux transporters. CytoFix™ BCECF is a modified BCECF derivative that contains a cell-retention group. The newly modified BCECF derivative is well retained in live cells for much longer time than the parent BCECF dye. CytoFix™ BCECF retains the same pH profile of BCECF with improved cell retention.