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Product Information Sheet

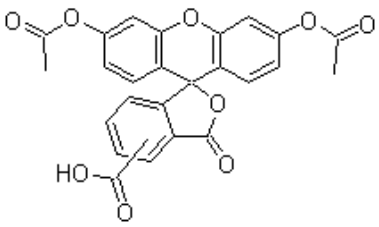
Ordering Information

Product Number:	22021
Product Name:	CFDA [5-(and 6)-Carboxyfluorescein diacetate] *Mixed isomers*
Unit Size:	100 mg
Storage Conditions:	<-15 °C and kept from light and moisture
Expiration Date:	12 months upon receiving

Chemical and Spectral Properties

Molecular Weight:	460.39

Chemical Structure:



Soluble in:	DMSO
Excitation Wavelength:	494 nm
Emission Wavelength:	521 nm

Application Notes

It is widely recognized that fluorescent labeling of cells is an effective means to determine total cell numbers or how many viable cells exist in a sample. Flow cytometry combined with fluorescent staining is a powerful tool to analyze heterogeneous cell populations. Fluorescein diacetate (FDA) and its derivatives are non-fluorescent molecules that diffuse into cells and are hydrolyzed by intracellular non-specific esterases to give fluorescent products. The fluorescent products can be accumulated only in those cells that have intact cell membranes; therefore, dead cells with leaky membranes are not stained. The precise kinetics of membrane transport and intracellular hydrolysis of FDA and its analogs (such as CDCFDA) are related to cellular functions, thus FDA labeling can be used for monitoring cells by flow cytometry or fluorescence microscopy. The fluorescence intensity of labeled cells by FDA dyes varies considerably among cell lines and strains, probably because of differences in intracellular esterase activity. CFDA is an amine–reactive FDA derivative that can be used to prepare a variety of FDA conjugates.