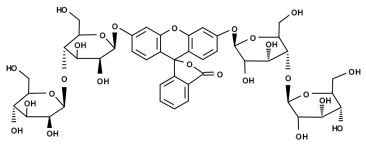
FCB [Fluorescein di-beta-D-cellobioside]

Catalog number: 14025
Unit size: 1 mg

Product Details

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

Chemical Properties

Appearance	Yellow solid
Molecular Weight	980.87
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	498 nm
Emission Wavelength	517 nm

Applications

This non-fluorescent fluorescein substrate generates the bright fluorescein product that has Ex/Em = 492/514 nm, and can be easily detected with a FITC filter set. In general, fluorescein substrates are much more sensitive than coumarin or nitrophenol-based substrates. This fluorescein substrate is used for monitoring cellulase activities. Cellulases are a family of enzymes that include β-glucosidases, endoglucanases and exoglucanases. These enzymes cleave the β-1,4-D-glycosidic bonds that link the glucose units comprising cellulose. In addition to being produced by plants, cellulase activity is found in many fungi and bacteria, including some plant pathogens. Most animal cells are not known to produce cellulase, in which the cellulolytic activity is often carried out by symbionts. The study of cellulase activity has many applications in plant molecular biology, agriculture, and manufacturing. Cellulase is becoming important in the development of alternative fuel sources, as glucose obtained from cellulose hydrolysis is easily fermented into ethanol. Activity of most cellulases can be conveniently monitored using this sensitive fluorescein cellobioside. Upon cleavage, the fluorescent compound, fluorescein, is released and activity measurements are easily obtained in a microtiter plate based assay format.