iFluor® 700 acid

Catalog Number: 71700, 71701
Unit Size: 1 mg, 5 mg

Product Details

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

Chemical Properties

Appearance	Solid
Molecular Weight	981.28
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	690 nm
Emission Wavelength	713 nm

Applications

iFluor® 700 acid is a bright, near-infrared fluorescent dye with spectral properties similar to Alexa Fluor™ 700. It has excitation and emission maxima at 690 nm and 713 nm, respectively, and is optimally excited by standard 633 nm or 640 nm laser lines. The dye offers high photostability, strong fluorescence intensity, and minimal spectral overlap, making it an excellent choice for multi-color applications such as flow cytometry, fluorescence microscopy, and *in vivo* imaging. Its high extinction coefficient and efficient quantum yield enable reliable detection, even under challenging experimental conditions.

iFluor® 700 Key Features

- **High performance:** iFluor® 700 shows brighter fluorescence than Alexa Fluor™ 700
- **Ex/Em maxima:** 690/713 nm
- **Quantum yield:** 0.23
- **Extinction coefficient:** 220,000 $cm^{-1}M^{-1}$
- **Spectrally similar dyes:** Alexa Fluor™ 350

As a non-reactive free acid, iFluor® 700 can be used as a reference standard in assays involving iFluor® 700-conjugated probes. It also serves as a useful control in confocal microscopy, immunocytochemistry (ICC), high-content screening (HCS), flow cytometry, and live-cell imaging. Additionally, iFluor® 700 acid can be converted into reactive forms, such as NHS or STP esters, for covalent labeling. Using water-soluble carbodiimides like EDAC, the dye can be conjugated to primary amines, hydrazines, or hydroxylamines, enabling efficient labeling of proteins, antibodies, peptides, and amine-modified oligonucleotides.