# XFD700 acid

Catalog Number: 1799
Unit Size: 10 mg

## Product Details

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

## Chemical Properties

| | |
|---|---|
| Appearance | Solid blue |
| Molecular Weight | 1102.97 |
| Soluble In | DMSO |

## Spectral Properties

| | |
|---|---|
| Excitation Wavelength | 696 nm |
| Emission Wavelength | 719 nm |

## Applications

XFD700, manufactured by AAT Bioquest, is a near-infrared fluorescent dye structurally similar to Alexa Fluor™ 700 (Thermo Fisher). It is optimally excited by 633–640 nm laser lines and offers a relatively low fluorescence intensity, making it particularly well-suited for direct imaging of high-abundance targets in both microscopy and flow cytometry. This allows researchers to allocate brighter dyes for detecting lower-abundance antigens, improving overall panel design. XFD700 exhibits excellent aqueous solubility and maintains consistent fluorescence stability across a broad pH range (pH 4–10), ensuring robust and reproducible performance under diverse experimental conditions. Its long-wavelength emission effectively minimizes background autofluorescence, leading to enhanced signal-to-noise ratios, especially in complex biological samples such as tissues. In multicolor flow cytometry panels, XFD700 serves as an ideal option between APC and APC-iFluor® 780, enabling better resolution in complex assays.

XFD700 acid is a non-reactive compound that can be employed as a reference standard in studies utilizing XFD700 conjugates. It is also suitable for use as a control in confocal microscopy, immunocytochemistry (ICC), high-content screening (HCS), flow cytometry, and live cell imaging applications. Furthermore, it can be utilized in the synthesis of activated esters and STP and can be coupled to hydrazines, hydroxylamines, or amines in aqueous solutions using water-soluble carbodiimides (e.g., EDAC). This allows for the conjugation of the dye to amino-containing molecules, such as proteins, antibodies, amine-modified oligonucleotides, and peptides.