

Product Data Sheet

Date of Issue: 7 Oct 2021

1. Product Information

- Product Name : Flamma® 675 Maleimide
- Catalog Number : PWM1415
- Packing Unit : 1 mg / 5 mg / 25 mg
- Appearance : Blue Solid
- Storage Conditions : Protect from Light at -20 °C

2. Additional Information

- Fluorophore Label : Flamma® 675
- Reactive Group : Maleimide
- Reactive Toward : Thiol
- Molecular Formula : $C_{49}H_{54}N_4O_{15}S_4$
- Molecular Weight : 1067.23 g/mol
- Excitation $_{Max}$: 675 ± 3 nm
- Emission $_{Max}$: 691 ± 4 nm
- Extinction Coefficient : $\geq 200,000$ /cm·M

3. Description

Flamma® Fluors 675 Maleimide is a thiol reactive near infrared (NIR) dye induced from benzindocyanine structure and used to generate a stable fluorescence signal in bioimaging. The maxima of Ex/Em values are at 675/691 nm, similar to that of Alexa 680, Cy5.5, IRDye 680LT and DyLight 680. Flamma 675 might be excited using 633 nm laser line and the emission occurs at biological tissue permeable NIR region. Flamma 675 maleimide can be conjugated to low-abundance biomolecules in fixed cells with great sensitivity, and NIR emission allows in vitro imaging in biological studies. Maleimides selectively label thiols of cysteine residue via 1,4-addition pathway, without interacting with amines, to form thioether linkage. Maleimides apparently do not react with methionine, histidine or tyrosine, but they might react with primary amines under strong basic environment. We offer Flamma Fluors 675 maleimide for labeling of antibodies, peptides, proteins, ligands, and amplification substrates optimized for in vitro imaging.