

# Product Data Sheet

Date of Issue: 7 Oct 2021

## 1. Product Information

- Product Name : Flamma® 648 Isothiocyanate
- Catalog Number : KWI1215
- 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® 648
- Reactive Group : Isothiocyanate
- Reactive Toward : Primary amine on proteins and ligands, amine-modified oligonucleotides
- Molecular Formula :  $C_{38}H_{48}N_4O_7S_3$
- Molecular Weight : 769.01 g/mol
- Excitation  $_{Max}$  :  $648 \pm 3$  nm
- Emission  $_{Max}$  :  $663 \pm 4$  nm
- Extinction Coefficient :  $\geq 227,000$  /cm·M

## 3. Description

Flamma® Fluors 648 Isothiocyanate is a reactive form of far-red fluorescent dye induced from cyanine structure and used to generate a stable fluorescence signal in bioimaging. The maxima of Ex/Em values are at 648/663 nm, similar to that of Alexa 647, Cy5 and DyLight 650. Flamma 648 might be excited using 593 or 633 nm laser lines and displays excellent optical property. Isothiocyanates are moderately reactive but quite stable in water and most organic solvents. Isothiocyanates react to primary amine to form reasonably stable thiourea linkage. Whereas labeling of protein with NHS esters can typically be done at pH 8.3, conjugation for isothiocyanates usually require pH above 9. We offer Flamma Fluors 648 isothiocyanate for labeling of antibodies, peptides, proteins, ligands, and amplification substrates optimized for cellular labeling and detection.