

# Product Data Sheet

Date of Issue: 7 Oct 2021

## 1. Product Information

- Product Name : ICG Isothiocyanate
- Catalog Number : POI1616
- Packing Unit : 1 mg / 5 mg / 25 mg
- Appearance : Green Solid
- Storage Conditions : Protect from Light at -20 °C

## 2. Additional Information

- Fluorophore Label : ICG
- Reactive Group : Isothiocyanate
- Reactive Toward : Primary amine on proteins and ligands, amine-modified oligonucleotides
- Molecular Formula :  $C_{48}H_{54}N_4O_4S_2$
- Molecular Weight : 815.1 g/mol
- Excitation  $_{Max}$  :  $785 \pm 3$  nm
- Emission  $_{Max}$  :  $812 \pm 4$  nm
- Extinction Coefficient :  $\geq 78,000$  /cm·M

## 3. Description

- Because qFlamma® Black01 Maleimide developed by advanced manufacturing technology of BioActs has a wide range of quench that is 400 ~ 800 nm, It can combine with any fluorescent dyes in Dual labeled probe. In any combination with (in dual labeled probe (Dual labeled probe) it can emit its features. Dual labeled probe is a combination of Fluorescent dye and Quencher based on the principle of Fluorescence resonance energy transfer (FRET). In general, it is labeled on nucleic acid, peptide or nanoparticles and utilized in areas such as qPCR, measurement of enzyme activity.
- qFlamma® Black01 Maleimide that features high water solubility bonds specifically to Thiol group (-SH) which is contained in Cysteine of protein. After conducting pre-treatment process that reduces disulfide bond in protein using reducing agent such as DTT, TCEP or 2-mercaptoethanol prior to reaction, it can conjugate qFlamma® Black01 Maleimide and protein.