

## Cyanine7.5 NHS ester

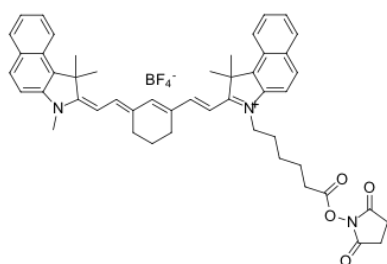
<http://www.lumiprobe.com/p/cy75-nhs-ester>

Cyanine7.5 is a NIR dye with very long-wave emission. This product is amine-reactive derivative of this fluorophore.

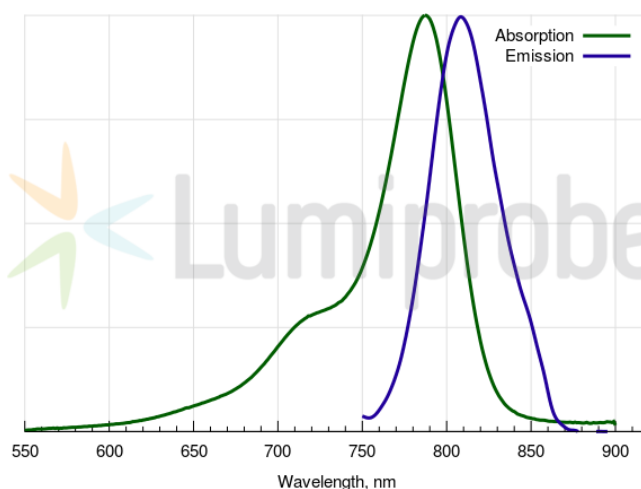
Near infrared radiation readily penetrates tissues and can be used for imaging applications in vivo.

This product can be used for the labeling of various biomolecules containing amine groups, such as proteins and peptides, to track their distribution in organism in vivo by NIR imaging.

Increased rigidity of central polymethyne moiety allows to increase quantum yield by 20% compared to parent structure of Cy7.5® NHS.



**Cy7.5 NHS ester structure**



**Cy7.5 absorbance and emission spectra**

### General properties

|                         |                                                                                                                                                                                             |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Appearance:             | green powder                                                                                                                                                                                |
| Mass spec M+ increment: | 630.4                                                                                                                                                                                       |
| Molecular weight:       | 833.76                                                                                                                                                                                      |
| CAS number:             | 2708152-94-5                                                                                                                                                                                |
| Molecular formula:      | C <sub>49</sub> H <sub>52</sub> N <sub>3</sub> BF <sub>4</sub> O <sub>4</sub>                                                                                                               |
| IUPAC name:             | 1H-Benz[e]indolium, 2-[2-[3-[2-(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)ethylidene]-1-cyclohexen-1-yl]ethenyl]-3-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,1-dimethyl- |
| Solubility:             | soluble in organic solvents (DMSO, DMF, dichloromethane), low solubility in water                                                                                                           |
| Quality control:        | NMR <sup>1</sup> H, HPLC-MS (95%)                                                                                                                                                           |
| Storage conditions:     | Storage: 12 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Avoid prolonged exposure to light. Desiccate.                                 |

### Spectral properties

|                                            |        |
|--------------------------------------------|--------|
| Excitation/absorption maximum, nm:         | 788    |
| ε, L·mol <sup>-1</sup> ·cm <sup>-1</sup> : | 223000 |
| Emission maximum, nm:                      | 808    |
| Fluorescence quantum yield:                | 0.10   |