FluoProbes® 490 labeling agents

A great fluorophore for labeling biomolecules with fluorescent green emission

Product Information

<table>
<thead>
<tr>
<th>Product name</th>
<th>cat. number</th>
<th>MW (g·mol⁻¹)</th>
<th>λexc/λem, max. (nm)</th>
<th>mol. abs. (M⁻¹·cm⁻¹)</th>
<th>Quantum yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoprobes® 490 Carboxyl group</td>
<td>FP-JO2790, 1mg</td>
<td>769.66</td>
<td>493 / 518</td>
<td>73,000</td>
<td></td>
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<tr>
<td>Fluoprobes® 490 Amino group</td>
<td>FP-JO2780, 1mg</td>
<td>925.78</td>
<td>518 / 518</td>
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<td>Fluoprobes® 490 NHS ester</td>
<td>FP-JO2820, 1mg</td>
<td>1011.20</td>
<td>518 / 518</td>
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<tr>
<td>Fluoprobes® 490 Maleimide</td>
<td>FP-JO2810, 1mg</td>
<td>799.74</td>
<td>518 / 518</td>
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<tr>
<td>Fluoprobes® 490 Hydrazide</td>
<td>FP-7A3520, 1mg</td>
<td>827.86</td>
<td>518 / 518</td>
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<td>Fluoprobes® 490 – Protein Lab.Kit</td>
<td>FP-JO0910, 5 rxns</td>
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<tr>
<td>Other Fluoprobes® 490 products</td>
<td>See related products</td>
<td></td>
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</tr>
</tbody>
</table>

MW: molecular mass of the dye cation (MS)

Storage: (L): at +4°C (K): at +4°C long term at −20°C (M): at −20°C

FluoProbes® 490 is a green fluorescent label, part of the Fluoprobes® dyes series.

Fluoprobes® provide a full range of fluorophores to covers any applications, spanning from 390nm to 800nm. Fluoprobes® are designed for labeling biomolecules in advanced fluorescent detection techniques. Applications include multiple labeling, FRET, Quenching, polarisation anisotropy fluorescence, and life time resolved fluorescence, with protein as well as with nucleic acids, as well as drying materials.

Please see a presentation of selected most popular and remarkable FluoroProbes labels in standard applications (i.e. blue, green, orange, red, infrared), and more in the BioSciences catalogue and updated list of FluoroProbes dyes NHS esters.
Fluoprobes®490 label offers bright green fluorescence ($\lambda_{exc}/\lambda_{em.}: 493 / 518$ nm)

- Excited perfectly by an Argon laser
- Strong absorption, high fluorescence quantum yield,
- Intense and long-lived phosphorescence in solid matrix or at low temperatures

**Scientific and technical Information - derivates**

Fluoprobes®490 is available as different derivatives, suiting standard chemistry methods, and others:

**Storage and General uses**

- **Carboxylic derivatives** can be used for any kind of spectroscopy, and coupled to biomolecules by conventional chemistry, i.e. after activation at the carboxy group by EDC. Carboxylic derivatives are stored at ambient temperature and are stable for at least three years.

- **NHS-ester derivatives** are suited for direct labeling of amino groups in proteins and aminated DNA/RNA. The chemical group N-hydroxysuccinimidyl (NHS) reacts specifically with primary (–NH2) and secondary amines (-NH-) (in fact on its deprotonated form) in aqueous phase or at pH 8 (compatible with pH7 to 10) in PBS buffer (other buffer devoid of amines are possible) at a ratio of 1-6 over amine content. I.e. amines present in proteins (Lys aminoaicid) and in a lower proportion on NH2 located in terminal peptide chains. The reaction competes with hydrolysis that increases with pH, and with the high dilutions of the molecule that should be labeled. Please refer to the literature, or the technical sheet FT-BA680 (NHS-FluoProbes labels) for standard protocols. NHS-esters can be stored at 0-4°C, stable for several months, or at ~20°C for long term. They should be protected from moisture and light.

- **Maleimide derivatives** are suited for labeling of thiol groups of proteins or other molecules, e.g. specific labeling of cysteine. The maleimide group reacts very specifically with sulfhydryls –SH at neutral pH 6.5-7. The reaction is rapid (a few minutes for cysteine), but in the absence of –SH, maleimide stay well stable. In usual conditions, one should start with a ratio of 10-20 moles of maleimide per mole of protein. Please refer to the literature, or the technical sheet FT-BA681 (Maleimide-FluoProbes labels) for standard protocols. Maleimide derivatives can be stored at 0-4°C, stable for several months, or at ~20°C for long term. They should be protected from moisture and light.

- **Hydrazide derivatives** are available on inquire

You also may ask: Protein labeling kits, already prepared Fluoprobes conjugates (see related products), and custom labeling.

**Literature**


**Related products and documents**

*Other conjugates for Fluoprobes490:
- Streptavidin-FP490 FPJO2920
- Phalloidin FP-JO2830 Cystein-FP490 FP-HO0450 dUTP-FP490 FP-JO2800

*Other Fluoprobes dyes : see the Complete list of Fluoprobes dyes NHS esters at [http://www.interchim.fr/fr(HttpStatusCode://)/FPlistN.pdf](http://www.interchim.fr/fr(HttpStatusCode://)/FPlistN.pdf).

*Comparison of FP490 and FP488: see NT-FP490c

**Ordering information**

Catalog size quantities and prices may be found at [http://www.interchim.com](http://www.interchim.com)

Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask: Fluoprobes® / Interchim; Hotline : +33(0)4 70 03 73 06

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