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Invitrogen™

Alexa Fluor™ 790 NHS Ester (Succinimidyl Ester)

Alexa Fluor™ 790 is a bright and photostable near-IR dye that is spectrally similar to indocyanine green (ICG) and Read more

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Quantity:

100 µg

Catalog number A30051

Price (USD) / Each

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1

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Product Overview Recommendations Documents FAQ Citations & References

Alexa Fluor™ 790 is a bright and photostable near-IR dye that is spectrally similar to indocyanine green (ICG) and the IRDye™ 800 dye. Used for stable signal generation in imaging and flow cytometry, Alexa Fluor™ 790 dye is water soluble and pH-insensitive from pH 4 to pH 10. Fluorescence of this long-wavelength Alexa Fluor™ dye is not visible to the human eye but is readily detected by most imaging systems. As the longest-wavelength Alexa Fluor™ dye, the emission is well separated from commonly used far-red fluorophores such as Alexa Fluor™ 647 dye or allophycocyanin (APC), facilitating multicolor analysis. This fluorophore is also expected to be useful for small animal in-vivo imaging (SAIVI) applications or for two-color western applications with the LI-COR™ Odyssey™ infrared imaging system. In addition to reactive dye formulations, we offer Alexa Fluor™ 790 dye conjugated to a variety of antibodies, peptides, proteins, tracers, and amplification substrates optimized for cellular labeling and detection.The NHS ester (or succinimidyl ester) of Alexa Fluor™ 790 is the most popular tool for conjugating this dye to a protein or antibody. NHS esters can be used to label to the primary amines ($R\text{-}NH_2$) of proteins, amine-modified oligonucleotides, and other amine-containing molecules. The resulting Alexa Fluor™ conjugate will exhibit brighter fluorescence and greater photostability than the conjugates of other spectrally similar fluorophores.

Detailed information about this AlexaFluor™ NHS ester:

Fluorophore label: Alexa Fluor™ 790 dye
Reactive group: NHS ester
Reactivity: Primary amines on proteins and ligands, amine-modified oligonucleotides
Ex/Em of the conjugate: 784/814 nm
Extinction coefficient: 260,000 cm-1M-1
Spectrally similar dyes: indocyanine green (ICG) and the IRDye™ 800 dye
Molecular weight: ~1750

Typical Conjugation Reaction
You can conjugate amine-reactive reagents with virtually any protein or peptide (the provided protocol is optimized for IgG antibodies). You can scale the reaction for any amount of protein, but the concentration of the protein should be at least 2 mg/mL for optimal results. We recommend trying three different degrees of labeling, using three different molar ratios of the reactive reagent to protein.

Conjugate Purification

Labeled antibodies are typically separated from free Alexa Fluor™ dye using a gel filtration column, such as Sephadex™ G-25, BioGel™ P-30, or equivalent. For much larger or smaller proteins, select a gel filtration media with an appropriate molecular weight cut-off or purify by dialysis. We offer several purification kits optimized for different quantities of antibody conjugate:

Antibody Conjugate Purification Kit for 0.5-1 mg (A33086)

Antibody Conjugate Purification Kit for 20-50 µg (A33087)

Antibody Conjugate Purification kit for 50-100 µg (A33088)

Learn More About Protein and Antibody Labeling

We offer a wide selection of Molecular Probes™ antibody and protein labeling kits to fit your starting material and your experimental setup. See our Antibody Labeling kits or use our Labeling Chemistry Selection Tool for other choices. To learn more about our labeling kits, read Kits for Labeling Proteins and Nucleic Acids—Section 1.2 in The Molecular Probes™ Handbook.

We'll Make a Custom Conjugate for You

If you can't find what you're looking for in our online catalog, we'll prepare a custom antibody or protein conjugate for you. Our custom conjugation service is efficient and confidential, and we stand by the quality of our work. We are ISO 13485:2000 certified.

For Research Use Only. Not for use in diagnostic procedures.

Specifications

Quantity	100 µg
Product Type	Dye
Chemical Reactivity	Amine
Shipping Condition	Room Temperature
Reactive Moiety	Active Ester, Succinimidyl Ester
Label or Dye	Alexa Fluor™ 790
Label Type	Alexa Fluor
Product Line	Alexa Fluor™
Emission	814 nm
Excitation	784 nm

Store in freezer (-5 to -30°C) and protect from light.

Seasonal savings: $900 off & our science-themed holiday sweatshirt*

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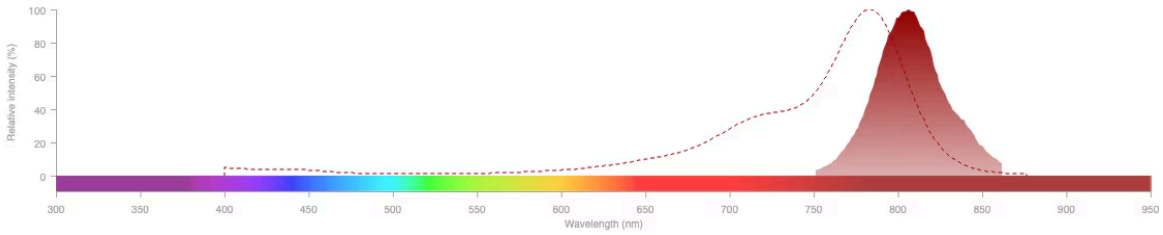
Fluorescence spectra

Open in SpectraViewer



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Safety Data Sheets

SDS

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Manuals

- Alexa Fluor Succinimidyl Esters (NHS Esters)
- Amine-Reactive Probes

Protocols

- Fluorescent Amine-reactive Alexa Fluor Dye Labeling of IgM Antibodies

Molecular Probes® Handbook

- Alexa Fluor Dyes Spanning the Visible and Infrared Spectrum—Section 1.3

Frequently asked questions (FAQs)

I am not going to use all of my Alexa Fluor succinimidyl ester reactive dye. Can I just make it up in DMSO and store aliquots at -20 degrees C?

I am labeling a protein with Alexa Fluor 488 SDP ester. The manual recommends using a sodium bicarbonate buffer at pH 8.3. Can I use a different buffer instead?

I am interested in purchasing Alexa Fluor 790 carboxylic acid derivative to be used as a free dye for a microscope standard. I see that you only offer Alexa Fluor 790 NHS Ester (Succinimidyl Ester) (Cat. No. A30051). Do you have any other recommendations?

Citations & References (2)

Search citations by name, author, journal title or abstract text

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Citations & References	Abstract
Evaluation of fluorophores for optimal performance in localization-based super-resolution imaging.	'One approach to super-resolution fluorescence imaging uses sequential activation and localization of individual fluorophores to achieve high spatial resolution. Essential to this technique is the choice of fluorescent probes; the properties of the probes,

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NHERF2 protein mobility rate is determined by a unique C-terminal domain that is also necessary for its regulation of NHE3 protein in OK cells.

Authors: Yang J, Singh V, Cha B, Chen TE, Sarker R, Murtazina R, Jin S, Zachos NC, Patterson GH, Tse CM, Kovbasnjuk O, Li X, Donowitz M,

Journal: J Biol Chem

PubMed ID: 23612977

Na(+)/H(+) exchanger regulatory factor (NHERF) proteins are a family of PSD-95/Discs-large/ZO-1 (PDZ)-scaffolding proteins, three of which (NHERFs 1-3) are localized to the brush border in kidney and intestinal epithelial cells. All NHERF proteins are involved in anchoring membrane proteins that contain PDZ recognition motifs to form multiprotein signaling complexes. In ... More

2 total citations

Other products to consider

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444.00 / Each

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DMSO, Anhydrous

Catalog number: D12345

125.00 / Each

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