FluoProbes AF - Azide

Azide activated dyes for fluorescent labeling of biomolecules by click chemistry

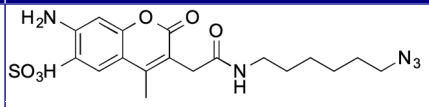
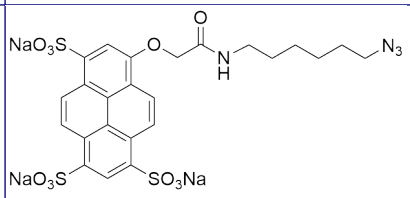
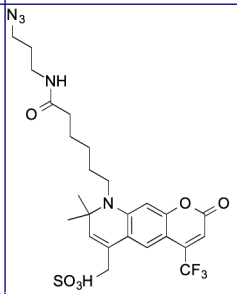
Products Description

A variety of FluoProbes® **AF** dyes has been used to label proteins, nucleic acids and other biomolecules for fluorescence techniques (imaging, biochemical analysis). They replace advantageously the conventional fluorochromes such as Fluorescein (FITC) and rhodamines (TRITC, RRX).

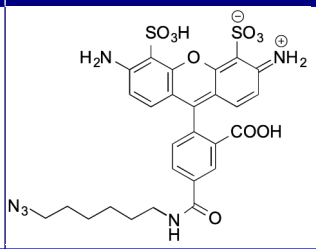
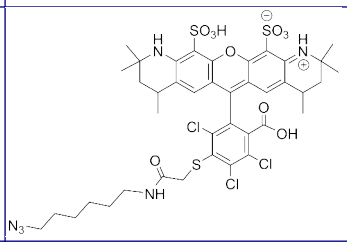
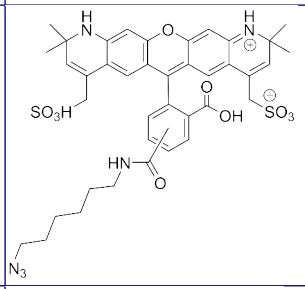
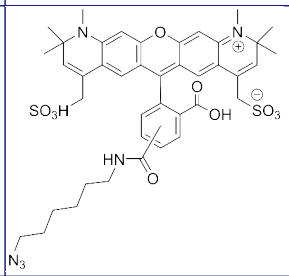
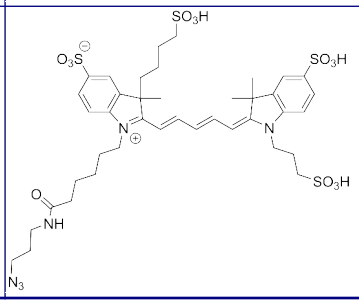
FluoProbes® **AF - Azide** react with alkynes via a copper-catalyzed click reaction (CuAAC) and with cyclo-octyne (DBCO) by stain-promoted cyclo-addition withour need of catalyzer or elevated temperature. This click chemistry is increasingly being used in a variety of biological applications, because it is biorthogonal.

Ask alternatively the **picolyl Azide** derivates. Picolyl Azide incorporates a copper-chelating motif to raise the effective concentration of Cu(I) at the reaction site to boost the efficiency of the CuAAC reaction, resulting in a faster and more biocompatible CuAAC labeling. Up to 40-fold increase of signal intensity, compared to conventional azides, was reported

The table below gives main physical and fluorescence characteristics of the activated dyes.

Product name cat.number/qty	**MW** g·mol^{-1} **(+added MW)**	**λ abs./em.** nm	**mol. abs.** M^{-1}cm^{-1}	Comment, structure
AF350 – Azide B432B1, 1mg Appearance: grey to yellow solid Soluble in Water, DMSO, DMF	437.47	346 / 445	19 000	
AF405 – Azide B432A1, 1mg (M) Appearance: yellow solid Soluble in Water, DMSO, DMF	706.60 (sodium salt) [640.65 (protonated)]	402 / 424	35 000	
AF430 – Azide B432H1, 1mg (M) Appearance: yellow solid Soluble in Water, DMSO, DMF	585.60	430 / 537	15 000	

FT-AXCJ91

Product name cat.number/qty	**MW** g·mol^{-1} (+added MW)	**λ abs./em.** nm	**mol. abs.** M^{-1}cm^{-1}	Comment, structure
AF488 – Azide FP-AXCJ91, 1mg Apparence: Orange to light red solid Soluble in Water, DMSO, DMF	861.04	494 / 517	76 000 QY: 0.92	
AF532 – Azide B432C1, 1mg Appearance: Orange to light red solid Soluble in Water, DMSO, DMF	738.79	530 / 554	78 000	
AF546 – Azide B432I1, 1mg Appearance: red solid Soluble in Water, DMSO, DMF	972.36 (protonated)	554 / 570	110 000	
AF555 – Azide B432D1, 1mg Appearance: Orange to light red solid Soluble in Water, DMSO, DMF	955.14 (protonated)	555 / 572	155 000	
AF568 – Azide B432E1, 1mg (M) Appearance: solid Soluble in Water, DMSO, DMF	818.92	578 / 602	88 000 QY: 0.69	
AF594 – Azide B432F1, 1mg (M) Appearance: red solid Soluble in Water, DMSO, DMF	864.97 (protonated)	590 / 617	88 000	
AF647 – Azide B432G1, 1mg (M) Appearance: blue solid Soluble in Water, DMSO, DMF	864.97 (protonated)	648 / 671	270 000	

Storage: –20°C, protected from light
Avoid prolonged exposure to light. Desiccate.
Stable for 12 months after receival at -20°C in the dark.

FT-AXCJ91

AF350 is a blue-fluorescent dye optimal for use with the 350 nm UV laser.
It is a water-soluble, moderately photostable. It is routinely used for generation of stable signal in imaging and flow cytometry. The brightness and photostability of blue dyes are best suited to direct imaging of high-abundance targets.
It is structurally identical to AlexaFluor®350, and spectra are similar to AlexaFluor® 350

AF405: It is a blue-fluorescent dye optimal for use with the 405 nm laser line.
AF is a bright, blue-fluorescent probe optimally excited by the 407 nm spectral line of the krypton laser or the 408 nm violet laser diode. This probe is water-soluble and its fluorescence is pH independent from pH 4 to pH 10. The brightness and photostability of this dye are best suited to direct imaging of moderate-abundance targets. It is often used in multicolor applications, including flow cytometry and super-resolution microscopy using STORM.
AF405 is structurally similar to Alexa Fluor® 405, and spectrally matches DyLight® 405, AlexaFluor® 405, CF® 405S Dye, CF® 405, Cascade Blue®, DyLight® 405, and other pyrene-based fluorescent dyes.

AF430 is a bright, and photostable, green-fluorescent probe optimally excited near its absorption maximum at 432 nm. Its emission peaks at 539 nm is pH independent over a wide pH range. The brightness and photostability of blue dyes are well suited to direct imaging of moderate to high abundance targets.
It is structurally identical to AlexaFluor® 430, and spectra are similar to AlexaFluor® 430 and CF®430 Dye.
AF430 is not suitable for staining intracellular components of fixed and permeabilized cells due to high backgrounds.

AF488: It is a bright green-fluorescent dye optimal for use with the 488 nm Argon laser.
AF488 is is a bright, and highly photostable, green-fluorescent probe optimally excited by the 488 nm laser line. This probe is water-soluble and its fluorescence is pH independent over a wide pH range. The brightness and photostability of blue dyes are best suited to direct imaging of low-abundance targets.
AF488 is structurally identical to lexaFluor® 488 and spectrally matches many sulfonated rhodamine 110 core, including DyLight® 488, AlexaFluor® 488.

AF532: It is an yellow-fluorescent dye optimal for use with the frequency-doubled Nd:YAG laser line.
AF532 is ideally suited for the frequency-doubled Nd:YAG laser line. This probe is water-soluble and its fluorescence is pH independent over a wide pH range. The brightness and photostability of AF 532 dye are well suited to direct imaging of low-abundance targets.
AF 532 is structurally identical to AlexaFluor® 532. Its absorption/emission spectra is a perfect match to spectra of many other fluorescent dyes based on sulfonated rhodamine core, including AlexaFluor® 532 A532 and CF®532 Dye.
AF532 is structurally identical to lexaFluor® 532 and spectrally matches similar orange dyes, including DyLight® 532, AlexaFluor® 532.

AF546: It is a bright orange-fluorescent dye optimal for use with the 454-570 nm excitation.
AF546 is water-soluble, and pH-insensitive from pH 4 to pH 10 orange-fluorescent dye with absorption and emission maxima at 554 and 570 nm, respectively.
AF546 is structurally identical to AlexaFluor® 546 and matches corresponding excitation sources and reading filters of similar dyes such as AlexaFluor® 546 and A546.

AF555 is a is a water-soluble, bright orange-fluorescent dye with excitation ideally suited for the 532 nm or 555 nm laser lines and visualized with TRITC (tetramethylrhodamine) filter sets. It is pH insensitive from pH 4 to pH 10. The brightness and photostability of this dye are best suited to direct imaging of low-abundance targets.
AF555 is structurally identical to lexaFluor® 555 and spectrally matches similar orange dyes, including Cy3, DyLight® 555, AlexaFluor® 555.

AF568: It is a bright green-fluorescent dye optimal for use with the 568 nm laser line.
AF594 Azide is a bright, red-fluorescent, water-soluble, and pH-insensitive from pH 4 to pH 10. It maximal absorption and emission maxima are 590 and 617 nm, respectively. It can be used with the 561 nm and 594 nm laser lines. AlexaFluor® 594, CF® 594, DyLight® 594

AF594: It is a bright red-fluorescent dye optimal for use with the frequency-doubled He-Ne laser line.
AF594 is a bright, red-fluorescent is bright, water-soluble, and pH-insensitive from pH 4 to pH 10 red-fluorescent dye with absorption and emission maxima at 590 and 617 nm, respectively.
AF594 is structurally identical to AlexaFluor® 594 and spectrally matches similar red dyes, including DyLight® 594, AlexaFluor® 594, TexasRed (TR) and SulfoRhodamine101 (SR101).

AF647: It is a bright red-fluorescent dye optimal for use with the 633 nm or 647 nm laser lines.
AF647 is a water-soluble, pH-insensitive from pH 4 to pH 10, far-red-fluorescent probe. Its excitation ideally suited for the 633 nm or 647 nm laser lines. The brightness and photostability of this dye are best suited to direct imaging of low-abundance targets.
AF647 is structurally similar to AlexaFluor® 647, and spectrally is almost identical to Cy5 Dye, AlexaFluor® 647, CF® 647 Dye, or any other Cyanine5 based fluorescent dyes.

Related products

* **Click-&-Go™ AFdyes Labelint Kits**:
General purpose labeling kits for imaging alkyne-tagged proteins with the fluorescent AFDye Picolyl Azide

Click-&-Go™ Plus 405 Labeling Kit	1313
Click-&-Go™ Plus 488 Labeling Kit	1314
Click-&-Go™ Plus 532 Labeling Kit	1315
Click-&-Go™ Plus 546 Labeling Kit	1316
Click-&-Go™ Plus 555 Labeling Kit	1317
Click-&-Go™ Plus 568 Labeling Kit	1318
Click-&-Go™ Plus 594 Labeling Kit	1319
Click-&-Go™ Plus 647 Labeling Kit	1320

* **AF dyes** (similar to AlexaFluor®) functionalized by **NHS** (R08112), **Azide** (AXCJ91), **PicolylAzide** (AYH9B1), **Alkyne** (AXCECA), **Maleimide** (820731), **Hydrazide** (846631), **Amine** (), **Carboxyl** ()

* Alternative fluorescent dyes:
- **FluoProbes** (Superior brightness and photostability, i.e. FP488) –NHS (BA6800), –Azide (YE4970), –Maleimide (BA6810)
- **CY$_{anine}$ dyes** .
- Classic dyes such as **FAM, R110, JOE TAMRA,** and **ROX.**

* Other labeling/conjugation chemistries: Click Chemistry reagents

Ordering information

Catalog size quantities and prices may be found at 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