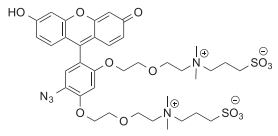
CLICK CHEMISTRY TOOLS

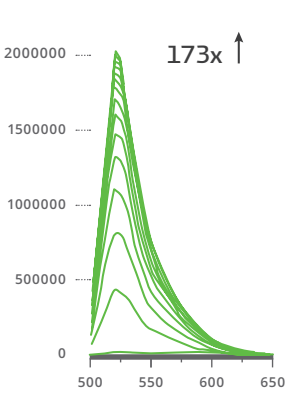
# CalFluor Azide Probes

A major shortcoming of visualization of alkyne-tagged biomolecule with fluorescent azide probes through CuAAC is the need to remove unreacted fluorescent probes. This is particularly problematic when imaging the intracellular environment, tissues of living organisms, or visualizing biomolecules in vivo. Difficulty to remove all unreacted fluorescent probes is also one of major contributor to background signal and non-specific binding.

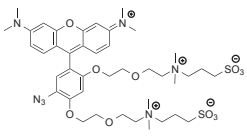
To overcome this shortcoming Carolyn Bertozzi group has designed fluorogenic azide probes that are activated by Cu-catalyzed or metal-free click chemistry. These azide probes are not fluorescent until they react with alkynes. Termed the CalFluors, these probes possess emission maxima that range from green to far-red wavelengths, and enable sensitive biomolecule detection under no-wash conditions. A number of reports showed that CalFluor probes are an indispensable tool for sensitive visualization of metabolically labeled molecules (glycans, DNA, RNA, and proteins) in cells, developing zebrafish, and mouse brain tissue slices under no-wash conditions.

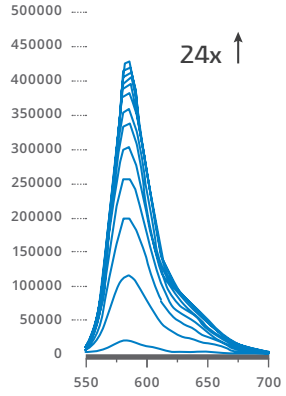
CalFluor 488 Azide



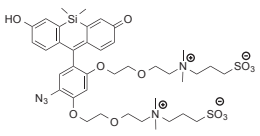


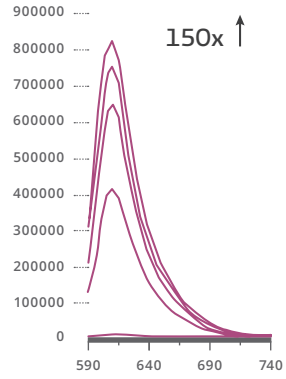

CalFluor 555 Azide



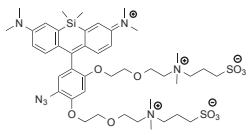


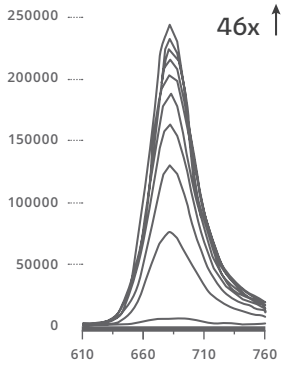

CalFluor 580 Azide






CalFluor 647 Azide






| Description | Ex/Em | Emission Color | Pkg. Size | Product # | Price |
|---|---|---|---|---|---|
| **CalFluor 488 Azide** | 500/521 | Green | 1 mg | 1369 –1 | **$195.00** |
| | | | 5 mg | 1369 –25 | **$795.00** |
| **CalFluor 555 Azide** | 561/583 | Red | 1 mg | 1370 – 1 | **$195.00** |
| | | | 5 mg | 1370 – 25 | **$795.00** |
| **CalFluor 580 Azide** | 591/609 | Red | 1 mg | 1371 – 1 | **$195.00** |
| | | | 5 mg | 1371 – 25 | **$795.00** |
| **CalFluor 647 Azide** | 657/674 | Near IR | 1 mg | 1372 – 1 | **$195.00** |
| | | | 5 mg | 1372 – 25 | **$795.00** |

## Selected References:


Shieh P., *et al.* (2015). CalFluors: A Universal Motif for Fluorogenic Azide Probes across the Visible Spectrum*J. Am. Chem. Soc.,* **137**: 7145−51.

Pawlak, J. B., *et al.* (2016). The Optimization of Bioorthogonal Epitope Ligation within MHC-I Complexes. *ACS Chem. Biol.,* **11**: 3172−8.