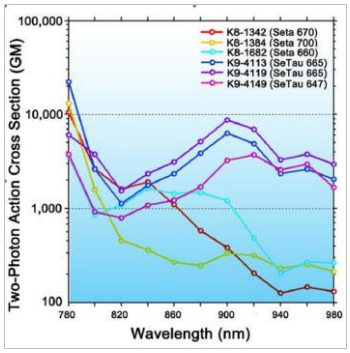
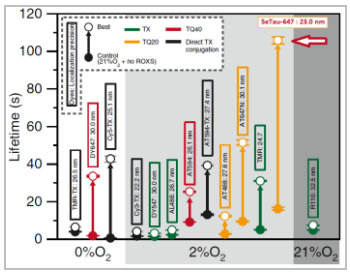
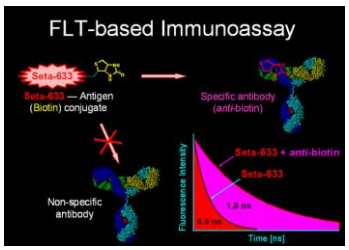
SETA BioMedicals: Fluorescent Tools for BioMedical Applications

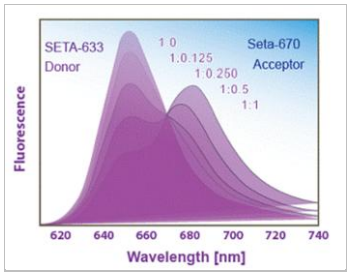
Proprietary Fluorescent Dyes, Probes, Labels, Tandems, Conjugates, and Standards











SETA BioMedicals produces and markets proprietary fluorescence detection reagents for biomedical and pharmaceutical research, clinical diagnostics and high-throughput screening.

- Labeling Technologies
  Next generation labels for proteins, oligonucleotides and other biomolecules with exceptional brightness and photostability
- Highly Water-Soluble Rotaxane Labels
  Novel, extremely bright and stable probes and labels based on squaraine rotaxanes: extinction coefficients of up to 295,000 $M^{-1}cm^{-1}$ and Q.Y.s of up to 65% in aqueous media
- Click Chemistry Reagents
  Azides and proprietary DBCO derivatives for Cu-free, strain-mediated click chemistry reactions in aqueous media
- 2-Photon Microscopy Labels
  Reactive fluorescent dyes based on cyanines, squaraines and squaraine rotaxanes with exceptional 2-photon absorption cross-sections up to 8,500 GM
- Fluorescence Lifetime Labels
  Lifetime labels with lifetimes up to 32 ns for fluorescence lifetime and polarization-based applications
- FRET Pairs
  FRET pairs with a wide range of Förster distances from 34 to 80 Å
- Phycobiliprotein Tandem-Conjugates
  Superior FRET-tandems of Seta dyes with phycobiliproteins (PE, APC, PerCP): Seta-R-PE-670, Seta-R-PE-775, Seta-APC-705, Seta-APC-780, Seta-PerCP-680

Main Characteristics

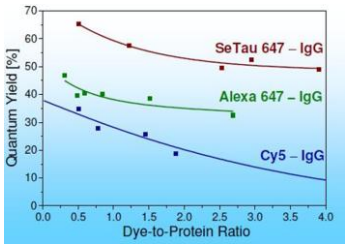
Wide spectral range: Square, Seta, and SeTau dyes absorb between 270–800 nm and emit in the 450–850 nm spectral range. Unlike other commercially available dyes of the **Cy** and **Alexa,** series, some of the red and NIR emitting markers can be excited not only with the red, 635-670-nm light sources but also with the UV and blue, 380-nm, 405-nm, 436-nm, or 488-nm LEDs and lasers.

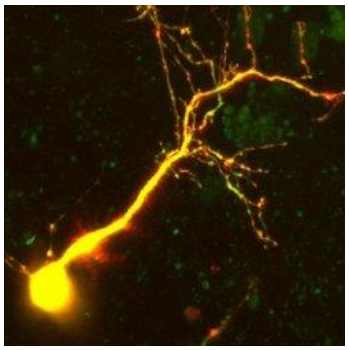
Extremely bright: The red and NIR Square, Seta, and SeTau dyes have high extinction coefficients (up to 295,000 $M^{-1}cm^{-1}$), and quantum yields up to 60% (bioconjugates up to 70%) in aqueous buffer solutions.

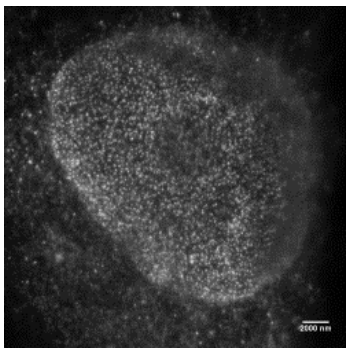
High stability: Compared to Cy, Alexa and other commercially available dyes, Square, Seta, and in particular SeTau-squaraine rotaxane dyes exhibit much higher photostability and stability against oxidizers such as ozone and/or hydrogen peroxide compared to other dyes.

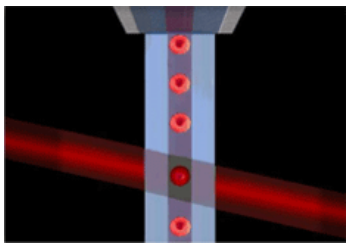
SETA BioMedicals
Fluorescent Tools for BioMedical Applications

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Long fluorescence lifetimes: Selected SeTau dyes have fluorescent lifetimes in the order of 10 – 30 ns in aqueous media.

Low blinking: The long-wavelength Square, Seta, and SeTau dyes show low blinking effects and therefore are promising in single molecule applications.

High sensitivity towards the microenvironment: Square and Seta probes exhibit high affinity for proteins, biomembranes and lipoproteins and therefore can be used for their detection and quantification.

pH-sensitivity in physiological and alkaline pH range: Selected Square and Seta probes and labels display sensitivity in the physiological and alkaline pH range (see, e.g., Square-650-pH-NHS).

Applications

SETA BioMedicals fluorescent detection reagents are used in fluorescence applications with intensity, polarization or fluorescence lifetime (FLT) as the read-out parameter.

More specific areas include:

- DNA/Protein Microarrays
- Biological Imaging
- Flow Cytometry and Lifetime Flow Cytometry
- Immunology
- Drug Discovery
- Cellular and Molecular Biology
- Proteomics
- Genomics
- High-throughput Screening (HTS)
- Single Molecule Applications
- Photodynamic Therapy
- Clinical Diagnostics
- Super-resolution Microscopy

Contact us about these and other products.

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