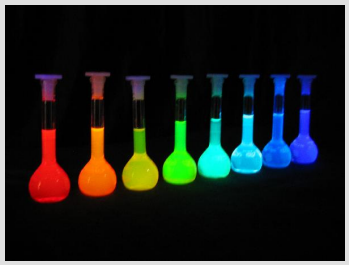
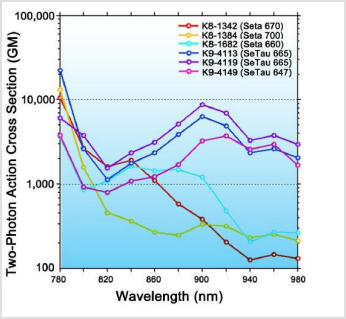
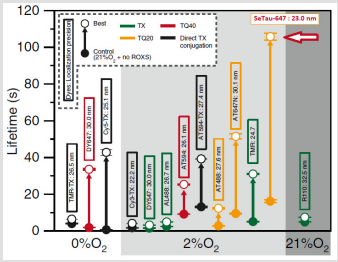
SETA BioMedicals

Fluorescent Tools for BioMedical Applications

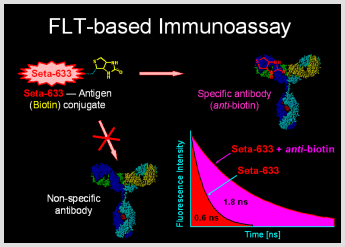


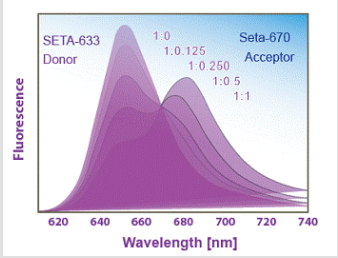




SETA BioMedicals produces and markets proprietary fluorescence detection reagents for biomedical and pharmaceutical research, clinical diagnostics and high-throughput screening.

- 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 200,000 [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 from 500 to 10,000 [GM]
- Fluorescence Lifetime Labels
  Lifetime labels with lifetimes from 0.5 to 32 ns for fluorescence lifetime and polarization-based applications
- FRET Labels
  FRET pairs with a wide range of Förster distances from 40 to 80 Å
- Phycobiliprotein Tandem-Conjugates
  Superior FRET-tandems of Seta dyes with phycobiliproteins (PE, APC, PerCP): Seta-PE-670, Seta-PE-775, Seta-APC-710, Seta-APC-780, Seta-PerCP-680





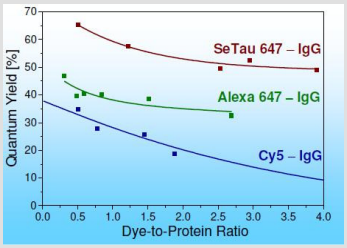
Main Characteristics:

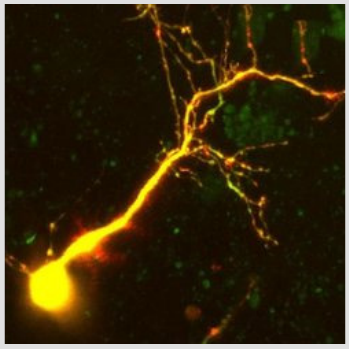
Wide spectral range: Seta, Square and SeTau dyes absorb and emit in the 350–850 nm spectral range. Unlike other commercially available dyes of the **Cy** and **Alexa** series, some of the red and NIR emitting markers can be excited not only with the red, 635-nm and 670-nm diode lasers but also with the blue, 370-nm or 405-nm lasers or light emitting diodes (LEDs).

Extremely bright: The red and NIR Seta, Square and SeTau dyes have high extinction coefficients (up to 270,000 $M^{-1}cm^{-1}$), and quantum yields up to 60% (bioconjugates up to 70%) in aqueous buffer solutions.

High stability: Compared to Cy or Alexa dyes, Seta, Square and especially SeTau dyes exhibit much higher photostability and stability against oxidizers such as ozone and/or hydrogen peroxide compared to other dyes.

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





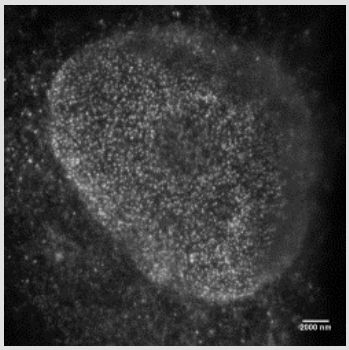
Low blinking: The long-wavelength Seta, Square and SeTau dyes show low blinking effects and therefore are promising in single molecule applications.

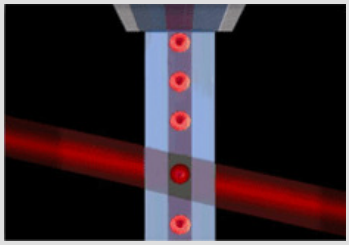
High sensitivity towards the microenvironment: Seta and Square probes exhibit high affinity for proteins, biomembranes and lipoproteins and therefore can be used for their detection and quantification.

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

SETA FRET- Besides a large number of FRET pairs with a wide range of excitation and emission wavelengths and Förster distances SETA BioMedicals also offers a free software for the calculation of overlap integrals and Förster distances.

Please contact us at 217 417 2160 or visit our website at *www.setabiomedicals.com* for more information.





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
- Immunology
- Drug Discovery
- Cellular and Molecular Biology
- Proteomics
- Genomics
- High-throughput Screening
- Single Molecule Applications
- Photodynamic Therapy
- Clinical Diagnostics
- Super-resolution Microscopy

Contact Details:

SETA BioMedicals

Fluorescent Tools for BioMedical Applications

2014 Silver Ct East
Urbana IL 61801
Tel.: 217 417 2160
FAX: 217 689 4237
www.setabiomedicals.com
support@setabiomedicals.com