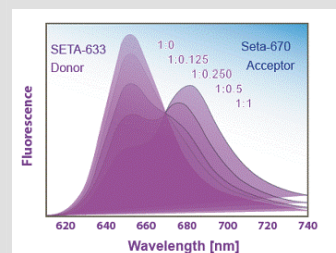
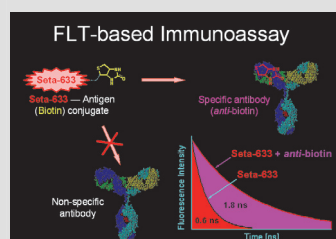
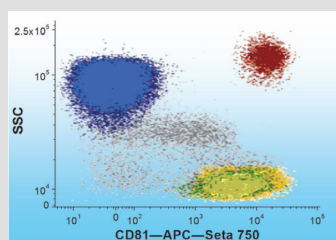
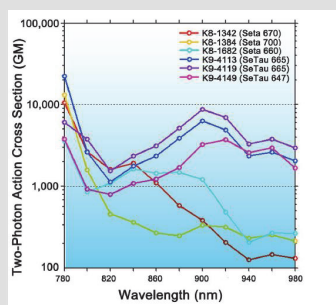




SETA BioMedicals

Fluorescent Tools for BioMedical Applications



Proprietary **fluorescent detection reagents** for biological, 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: $Q.Y.s \sim 60\%$ in water and $\epsilon \sim 200,000 M^{-1}cm^{-1}$.
- **Click Chemistry Reagents**
Azides and proprietary DBCO derivatives for Cu-catalyzed and Cu-free click chemistry reactions
- **2-Photon Microscopy Labels**
2-Photon labels based on squaraines and squaraine rotaxanes with exceptional 2-photon absorption cross-sections from **500 – 4000 GM**.
- **Lifetime Labels**
Lifetime labels with lifetimes from **0.5 to 32 ns** for lifetime and polarization applications
- **FRET Labels**
FRET pairs with a wide range of Förster distances from **40 – 80 Angstrom**
- **Phycobiliprotein Tandem-Conjugates**
Superior FRET-tandems of Seta dyes with phycobiliproteins (PE, APC, PerCP): **Seta-PE-670, Seta-PE-780, Seta-APC-715, Seta-APC-780, Seta-PerCP-680**.

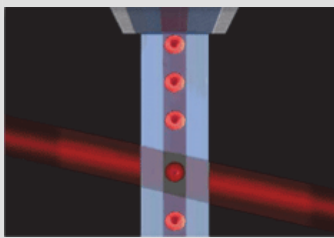
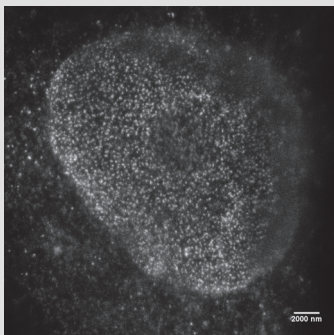
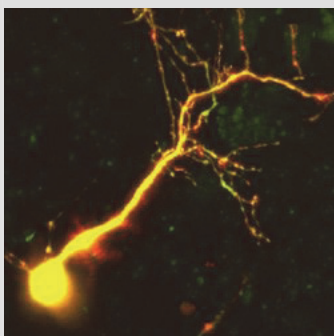
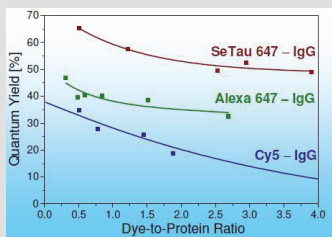
Main Characteristics:

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: As 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.

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 package** 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.

Areas of Application:

SETA BioMedicals fluorescent detection reagents are utilized in applications using intensity, polarization, fluorescence resonance energy transfer (FRET), or fluorescence lifetime (FLT) as the read-out parameter.

More specific areas include:

- Superresolution Microscopy
- [Biological Imaging](#)
- Flow Cytometry
- [Immunology](#)
- Drug Discovery
- [Cellular and Molecular Biology](#)
- Proteomics
- [Genomics](#)
- High-throughput Screening
- [Single Molecule Applications](#)
- Photodynamic Therapy
- [Clinical Diagnostics](#)

SETA BioMedicals
Fluorescent Tools for BioMedical Applications

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