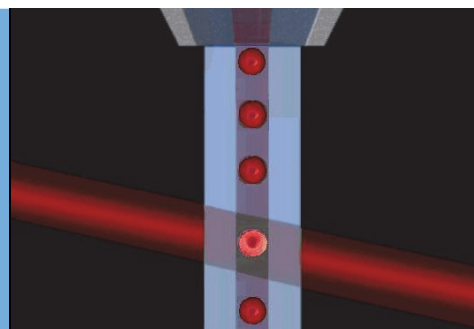


# SETA BioMedicals

Fluorescent Tools for BioMedical Applications

## Brighter Dyes and Tandems for Multicolor Flow Cytometry Applications



Seta Dyes are a family of fluorescent dyes that are ideal for flow cytometry and fluorescence microscopy applications. SETA BioMedicals **SeTau 405**, **Seta 700**, **SeTau 647** dyes and **Seta-R-PE-670**, **Seta-PerCP-680**, **Seta-APC-715**, **Seta-R-PE-780**, **Seta-APC-780** tandems are specifically optimized to yield antibody-conjugates with high fluorescence intensities, low spillover and low non-specific binding.

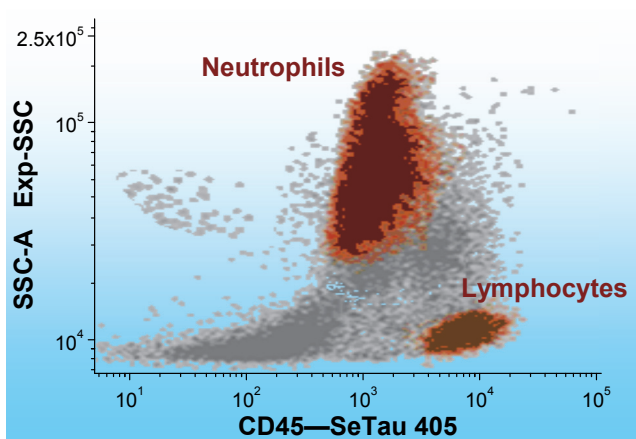
Fluorochrome	Fluorescence Color	Absorption max. [nm]	Fluorescence max. [nm]	Filter Set	Excitation Laser [nm]
<b>SeTau 405</b>	Green	405	518	525/50	405
<b>SeTau 647</b>	Red	649	695	695/40	633
<b>Seta 700</b>	Red / NIR	394, 688	704	710/45	405/633
<b>Seta- R-PE-670</b>	Red	566, 654	671	670/14	488, 532
<b>Seta-PerCP-680</b>	Red	481, 673	676	695/40	488
<b>Seta-APC-715</b>	NIR	651, 700	713	710/45	633
<b>Seta-APC-780</b>	NIR	651, 757	780	780/60	633
<b>Seta-R-PE-780</b>	NIR	566, 757	780	780/60	488

# SETA BioMedicals

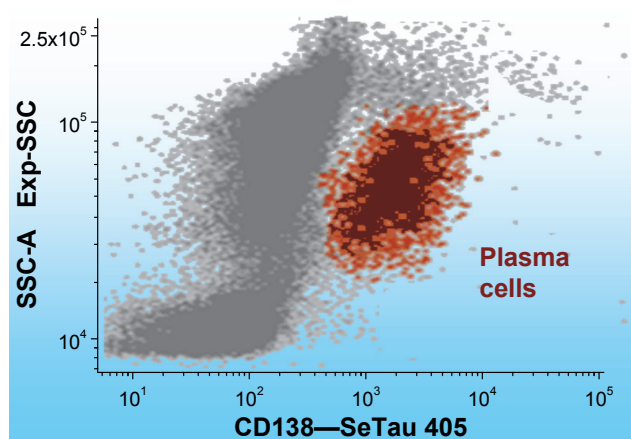
Fluorescent Tools for BioMedical Applications

## SeTau 405

**SeTau 405** is excitable with the violet laser (405 nm) and emits at 515 nm. This fluorochrome exhibits a large Stokes' shift with almost no spectral overlap and narrow emission peaks, resulting in maximum resolution and minimal compensation requirements.



Bone marrow plasma stained with  
**CD45 — SeaTau 405**



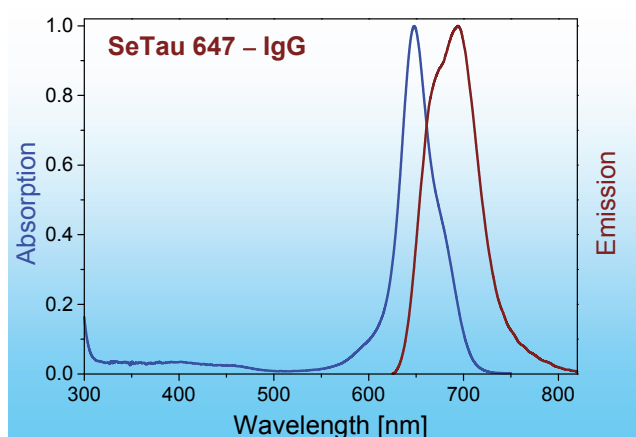
Pathological bone marrow plasma stained with  
**CD138 — SeaTau 405**

# SETA BioMedicals

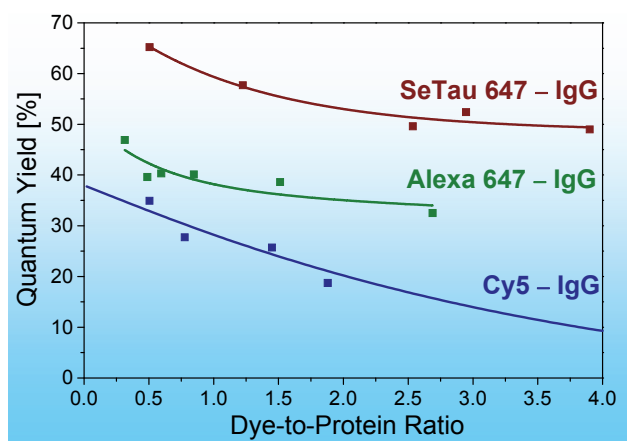
Fluorescent Tools for BioMedical Applications

## SeTau 647

**SeTau 647** is a squaraine-rotaxane, excitable with the red HeNe laser (633 nm) or red laser diodes. It is currently the brightest organic dye for this wavelength range, much brighter than Alexa 647. The suggested filter set is 695/40.



Absorption and emission spectrum of a **SeTau 647 – IgG conjugate** in phosphate buffer pH 7.4



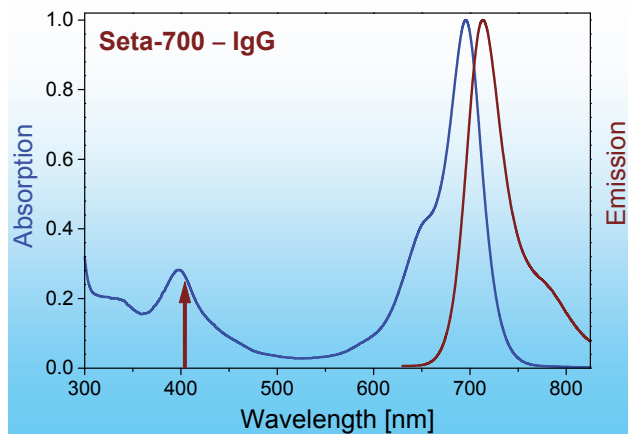
Quantum yield vs. dye-to-protein ratio of **SeTau 647 – IgG conjugate** in phosphate buffer (pH 7.4) compared to **Alexa 647** and **Cy5** IgG-conjugates

# SETA BioMedicals

Fluorescent Tools for BioMedical Applications

## Seta 700

**Seta 700** is a new large Stokes' shift dye which is excitable with the violet laser (405 nm) and emits at 704 nm but also can be excited with the 633 nm laser.



Absorption and emission spectrum of a **Seta 700 – IgG conjugate** in phosphate buffer pH 7.4

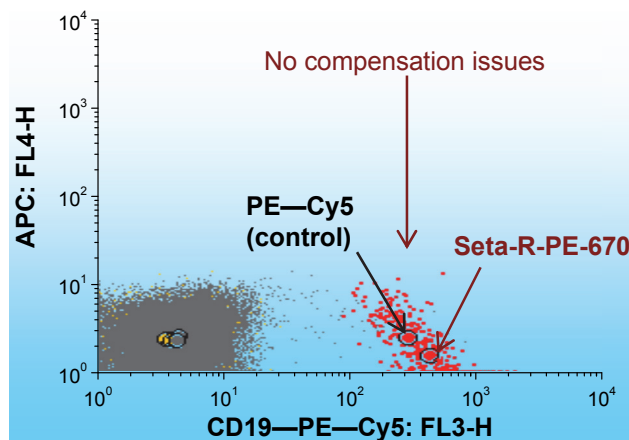
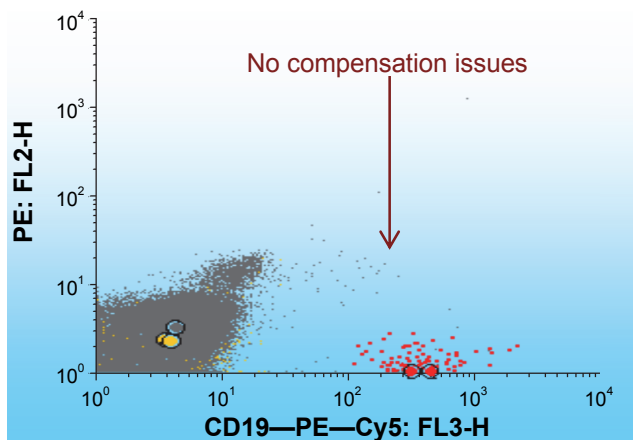
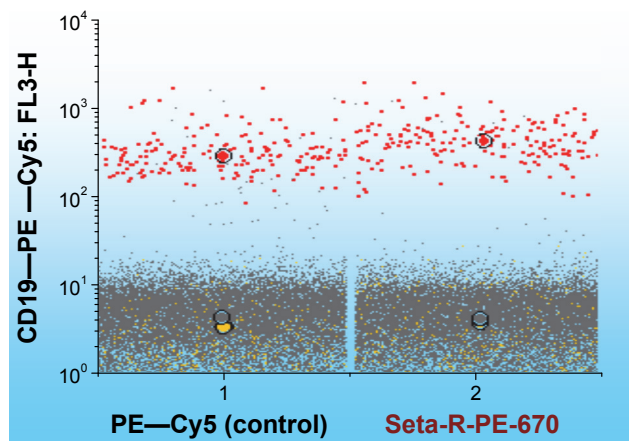
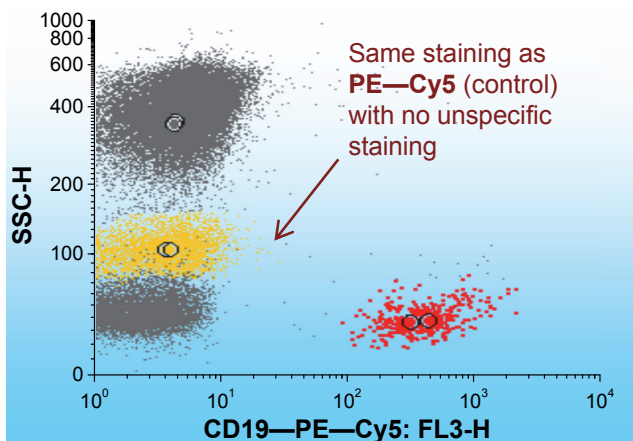
Flow analysis of **Seta 700 – IgG** with excitation at 405 nm using various filter sets is available upon request.

# SETA BioMedicals

Fluorescent Tools for BioMedical Applications

## Seta-R-PE-670

The **Seta-R-PE-670** tandem is excitable with the 488 laser and emits at 671 nm. This tandem yields bright conjugates with no non-specific binding and no compensation issues.

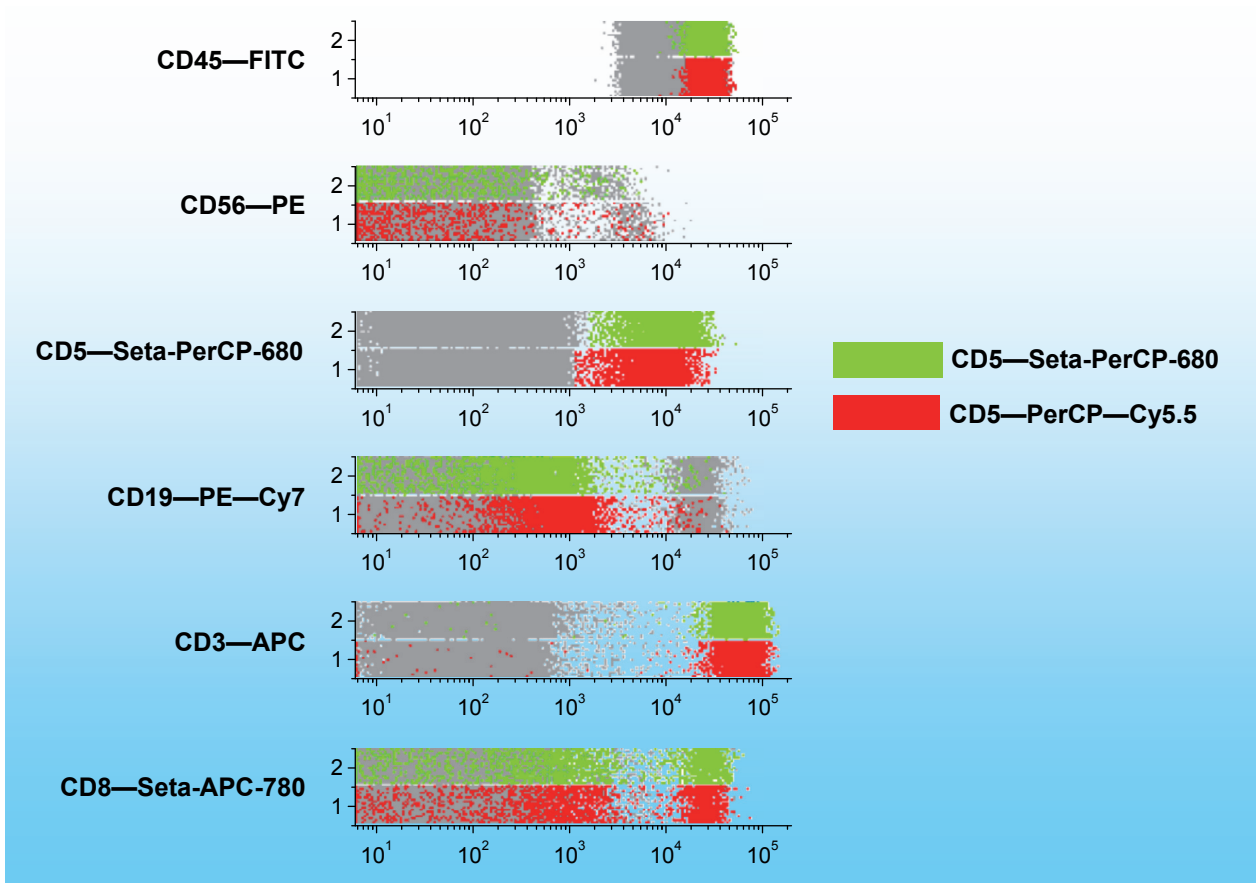


# SETA BioMedicals

Fluorescent Tools for BioMedical Applications

## Seta-PerCP-680

The **Seta-PerCP-680** tandem is excitable with the 488 laser and emits at 670–700 nm. This tandem yields bright and stable conjugates with no non-specific binding and no compensation issues.



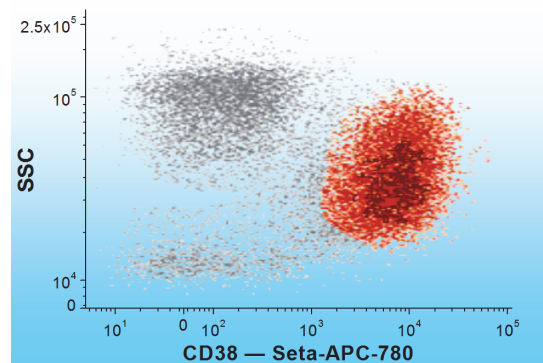
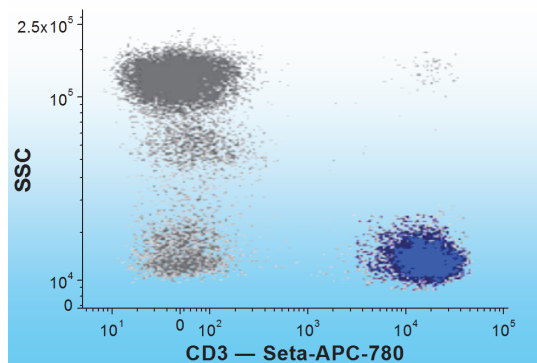
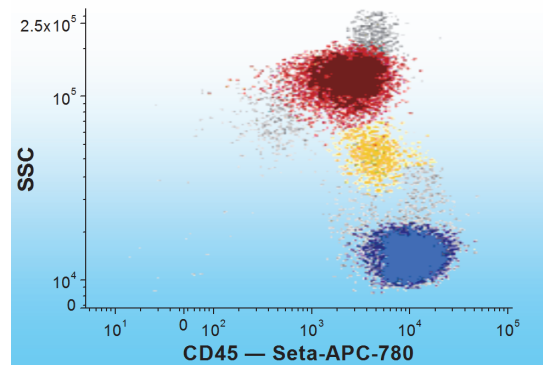
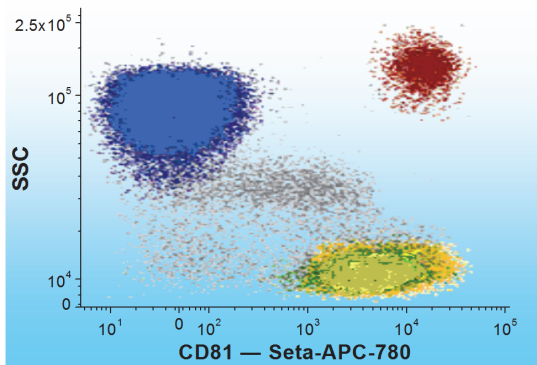
The histogram shows a mean fluorescence intensity representation of a lysate of whole blood gated on leukocytes (CD45+). Human peripheral blood lymphocytes CD5 are represented by either a red color (**PerCP – Cy5.5**) or by a green color (**Seta-PerCP-680**).

# SETA BioMedicals

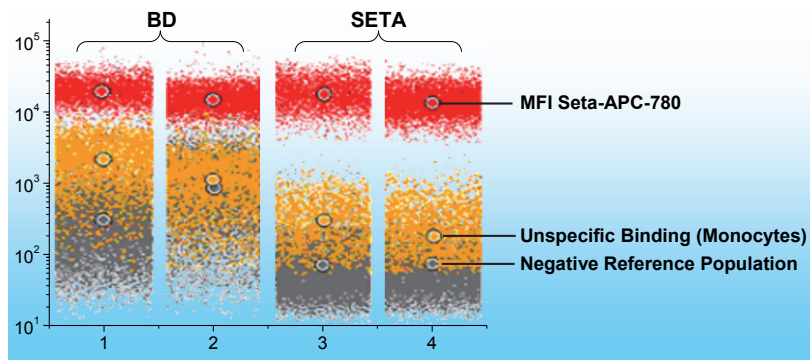
Fluorescent Tools for BioMedical Applications

## Seta-APC-780

**Seta-APC-780** with emission at 780 nm exhibits a bright signal, low unspecific binding and high photostability. It gives bright fluorescence with all conjugates in flow cytometric analysis. Importantly it is brighter and much more photostable compared to any **Cy7**-tandem.



Top and bottom left: Peripheral blood samples stained with **CD45-**, **CD81-** and **CD3 — Seta-APC-780**; Bottom right: plasma cells stained with **CD38 — Seta-APC-780**



Comparison of **CD3 — Seta-APC-780** (SETA BioMedicals) with **CD3 — APC — Cy7** (Becton Dickinson)