

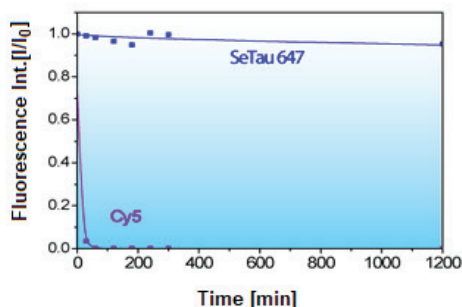
Seta and SeTau Dyes For Microarrays



Our highly bright and photostable SeTau dyes (squaraine rotaxanes) exhibit high chemical stability in particular against oxidative reagents such as peroxides or ozone and therefore are excellent detection reagents for use in DNA and protein microarrays where the fluorescence signals of cyanine dyes such as Cy5 and Alexa 647 are strongly dependent on the concentration of ozone during post-hybridization array washing.

Controlled exposures of microarrays to ozone confirmed the susceptibility of cyanine dyes (Cy5 or Alexa 647) to ozone levels as low as 5-10 ppb for periods as short as 10-30 s.

Below is the confirming data obtained by our Cancer Center customers:



Chemical Stability of SeTau-647 vs. Cy5/Alexa 647 in presence of hydrogen peroxide

Brightness Comparison:

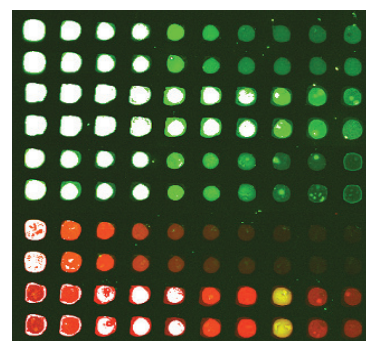
Competitor 1

Seta-555

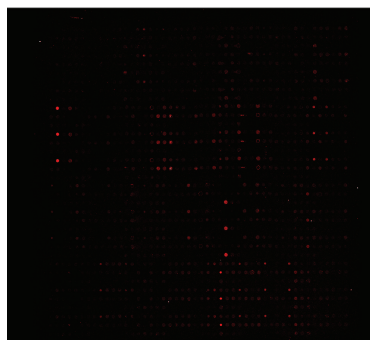
Competitor 2

Competitor 3

SeTau-647

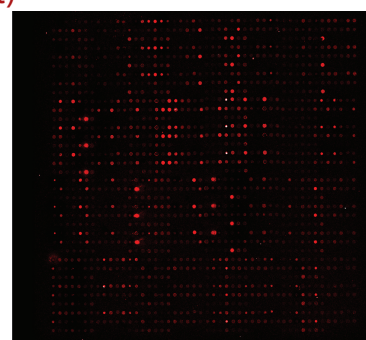


SeTau-647-IgG antibody (right) has up to 35% brighter signal than Alexa-647-IgG antibody (left)



Alexa-647- commercially labeled
Same Ab labeled with SeTau-647
Same plasma sample

Higher PMT setting for Alexa-647
(958) vs SeTau-647 (875)
Same antibody concentration



Dye Selection

Product Number	Product Name	Target Group	Medium	abs (nm)	[M ⁻¹ . cm ⁻¹]	em [nm]	QY [%]	FLT [ns]
K8-3335	Seta-555-NHS	NH ₂	PB 7.4	555	155,000	570	7	-
K9-4142	SeTau-647-di-NHS	NH ₂	PB 7.4	647	200,000	694	65	3.2
K9-4148	SeTau-647-Maleimide	SH	PB 7.4	648	200,000	692	45	3.2
K9-4149	SeTau-647-NHS	NH ₂	PB 7.4	649	200,000	695	61	3.2



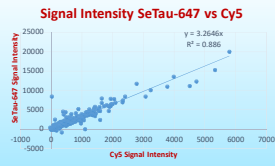
SETA BioMedicals
Fluorescent Tools for BioMedical Applications

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For more information please contact us at (217) 417 2160 or visit us at setabiomedicals.com

SeTau-647-labeled protein has brighter signal than Cy5-labeled protein

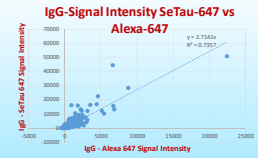
- 150 µg of depleted plasma protein
- Same concentrations of SeTau-647 or Cy5
- Same scan settings



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SeTau-647-IgG antibody has brighter signal than Alexa-647-IgG antibody

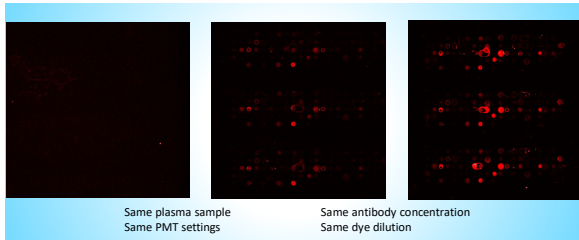
- Alexa-647-IgG was commercially labeled by Jackson
- SeTau-647-IgG was labeled in house
- Same antibody concentration
- Same PMT settings
- Same plasma sample



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SeTau-647-SleX antibody has brighter signal than Atto-647-SleX and Cy5-SleX antibody

Atto-647-SleX Cy5-SleX SeTau-647-SleX



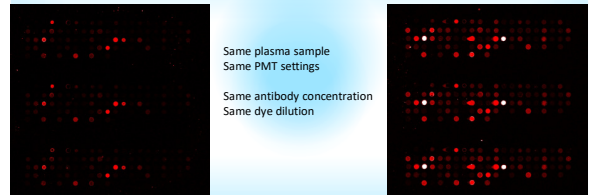
Same plasma sample
Same PMT settings

Same antibody concentration
Same dye dilution

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SeTau-647-SleA antibody has brighter signal than Cy5-SleA antibody

Cy5-SleA SeTau-647-SleA



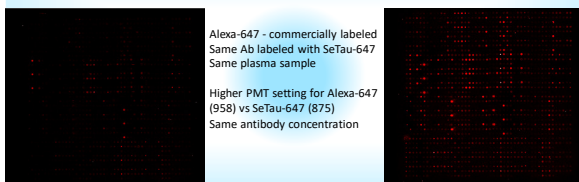
Same plasma sample
Same PMT settings
Same antibody concentration
Same dye dilution

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SeTau-647-IgG antibody has brighter signal than Alexa-647-IgG antibody

Alexa-647 - IgG

SeTau-647-IgG



Alexa-647 - commercially labeled
Same Ab labeled with SeTau-647
Same plasma sample
Higher PMT setting for Alexa-647
(958) vs SeTau-647 (875)
Same antibody concentration

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Call us at 217 417 2160 for additional information
or to order your test sample