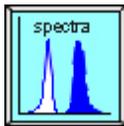
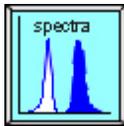
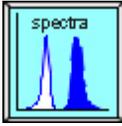
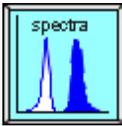
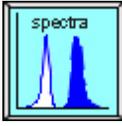
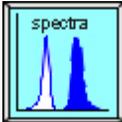
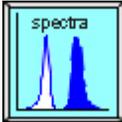
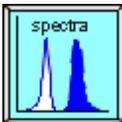
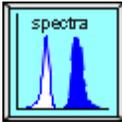
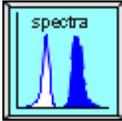


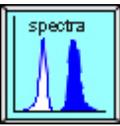
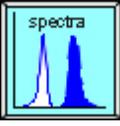
Reagents available for pilot experiments.

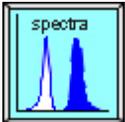
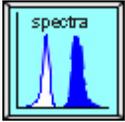
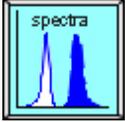
To encourage use of the FACSVantage for multicolor applications, the NCI ETIB Flow Laboratory is making available small quantities of novel and unusual fluorochrome-conjugated antibodies and labeling reagents, DNA dyes and other fluorescent reagents. Talk to [Bill](#) if you are interested in trying any of these reagents. ***They are intended for pilot experiments only, and are generally available only to ETI Branch faculty members who use our facility.***

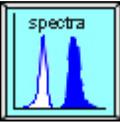
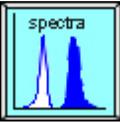
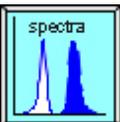
Reagent	Description	Forms	EX/EM	EX/EM Conditions	Suppliers
Alexa Fluor 350	A UV-excited, blue-emitting fluorochrome, Alexa Fluor 350 can be used simultaneously with FITC, PE, Red613 or PE-Cy5, PE-Cy7 and APC for five- and six-color analysis on the Vantage. Although dimmer than most of the above fluorochromes, it can be conjugated to antibodies against strongly expressed antigens, or used in secondary antibody or biotin-avidin labeling systems for signal enhancement. Alexa Fluor 350 is brighter and more photostable than AMCA, upon which it is based.	streptavidin		HeCad 325 nm, Ar 335 nm or Kr 351/357 nm or 424/44 or 440/10 NBP	Molecular Probes (secondary reagents and reactive form)
Alexa Fluor 430	A violet-excited, green-emitting fluorochrome, Alexa Fluor 430 can be used as a substitute (albeit somewhat dimmer) for Cascade Yellow. for simultaneous use with Cascade Blue, Cascade	streptavidin		Kr 413 nm 530/30 or 535/45 NBP	Molecular Probes (secondary reagents and reactive form)

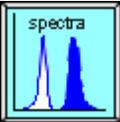
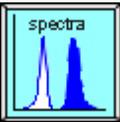
	Blue and Yellow have a tendency to bind together and are not recommended for simultaneous use.				
Alexa Fluor 488	These modified fluorescein molecules are brighter and more photostable than fluorescein and are particularly useful for intracellular labeling applications where quench-resistant labels are desired. For sample data using these bright, quench-resistant fluorochromes, go here .	anti-mouse IgG anti-rabbit IgG anti-goat IgG		Ar 488 nm 530/30 nm NBP	Molecular Probes (secondary reagents and reactive form)
Alexa Fluor 568	A lissamine rhodamine substitute, this fluorochrome is excited by the 568 nm line on our krypton-ion laser and has an emission maxima of 610-630 nm. It is brighter and more quench-resistant than lissamine rhodamine.	streptavidin anti-mouse IgG anti-rabbit IgG		Kr 568 nm or HeNe 594 nm 610/30 nm NBP HQ	Molecular Probes (secondary reagents and reactive form)
Alexa Fluor 594	A low molecular weight fluorochrome ideally excited using yellow-orange laser sources (such as dye head lasers). It emits in the orange-red. Alexa Fluor 594 can be used for multicolor protocols in place of APC where the appropriate laser source is available; interference with PE-Cy5 is far less than with other red-excited probes. It is spectrally similar to Texas Red but is brighter and more	streptavidin		CW dye head (590-620 nm) or HeNe 594 nm 610/20 NBP, 610/30 nm NBP HQ or 630/22 nm NBP	Molecular Probes (avidin and secondary antibodies)

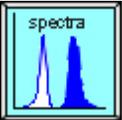
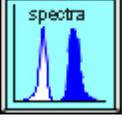
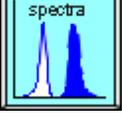
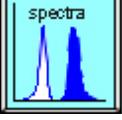
	photostable.				
Alexa Fluor 633	A low molecular weight substitute for APC.	streptavidin		HeNe 632 nm or red diode 635 nm 660/20 NBP	Molecular Probes (avidin and secondary antibodies)
Alexa Fluor 647	A more photostable substitute for Cy5.	streptavidin		HeNe 632 nm, red diode 635 nm or Kr 647 nm 675/20 NBP	Molecular Probes (avidin and secondary antibodies)
Alexa Fluor 660	A more photostable substitute for Cy5.	streptavidin		Kr 647 nm 675/20 or 710/20 NBP or 680 LP	Molecular Probes (avidin and secondary antibodies)
Alexa Fluor 680	A more photostable substitute for Cy5.5.	streptavidin		Kr 647 or 676 nm 710/20 NBP	Molecular Probes (avidin and secondary antibodies)
AMCA	A UV-excited, blue-emitting fluorochrome, AMCA can be used simultaneously with FITC, PE, Red613 or PE-Cy5, PE-Cy7 and APC for five- and six-color analysis on the Vantage. Although dimmer than most of the above fluorochromes, it can be conjugated to antibodies against strongly expressed antigens, or used in secondary antibody or	avidin anti-mB220 anti-mCD8		HeCad 325 nm, Ar 335 nm or Kr 351/357 nm 424/44 or 440/10 NBP	Molecular Probes (secondary reagents and reactive form) Jackson ImmunoResearch (secondary reagents)

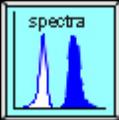
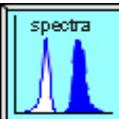
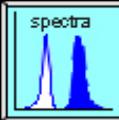
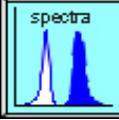
	biotin-avidin labeling systems for signal enhancement.				
APC	A 632 nm-excited red fluorochrome, APC can be excited both by the diode laser on the FACSCalibur and the helium-neon laser on the Vantage. It can be combined with FITC, PE and PerCP on the FACSCalibur for four-color analysis, or with FITC, PE, Red613 or PE-Cy5, PE-Cy7 and APC-Cy7 for five- and six-color analysis on the Vantage. It is one of the brightest fluorochromes per unit molecule currently characterized. For sample data, go here .	anti-mouse IgG anti-hamster IgG anti-human CD95 (Fas) avidin		HeNe 632 nm Red diode 635 nm 660/20 NBP	BD Pharmingen (many primary antibodies, secondary antibodies and avidin) Caltag (many primary antibodies, secondary antibodies and avidin) Prozyme (conjugation kits)
APC-Alexa Fluor 680	A tandem conjugate of APC and the Molecular Probes Cy5.5 equivalent Alexa Fluor 680. It can be used simultaneously with APC and APC-Cy7 for three-color analysis off of a red laser source.	streptavidin		HeNe 632 nm 710/20	
APC-Cy7	This novel fluorochrome is also a tandem conjugate, excited by a HeNe laser (630 nm) and emitting at 750 nm. It can be used simultaneously with APC for five- and six-color analysis on the Vantage. For sample data, go here .	streptavidin mouse B220 (CD45)		HeNe 632 nm 748LP	Caltag (avidin) BD Pharmingen (avidin)

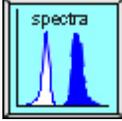
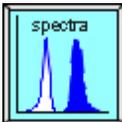
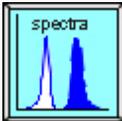
<p>Cascade Blue</p>	<p>This fluorochrome is excited by a 407 nm krypton laser beam and is useful for both extracellular and intracellular phenotyping. It can be detected simultaneously with Cascade Yellow for five- and six-color analysis. For sample data, go here.</p>	<p>anti-mouse IgG avidin</p>		<p>Kr 407 nm, violet diode 408 nm 440/10 NBP</p>	<p>Molecular Probes (secondary reagents and reactive form)</p>
<p>Cascade Yellow</p>	<p>This fluorochrome is also excited by a 407 nm krypton laser beam and is also useful for both extracellular and intracellular phenotyping. It emits in the green and can be used simultaneously with Cascade Blue. For sample data, go here.</p>	<p>anti-mouse IgG avidin</p>		<p>Kr 407 nm, violet diode 408 nm 535/45 NBP</p>	<p>Molecular Probes (secondary reagents and reactive form)</p>
<p>CryptoFluor-1</p>	<p>The CryptoFluor fluorochromes are cryptomonad algae-derived phycobiliproteins. They possess lower molecular weights than PE or APC, making them potentially useful for intracellular applications where the large size of PE and APC is prohibitive. We are assessing their applicability to intracellular cell cycle protein detection. Cryptofluor-1 has excitation characteristics similar to APC, although it can also be excited by shorter laser wavelengths. For sample data go here.</p>	<p>avidin</p>		<p>CW dye head (590 - 620 nm), HeNe 594 nm, HeNe 612 nm or HeNe 632 nm 660/20 NBP</p>	<p>Intergen Martek Biosciences Corporation</p>

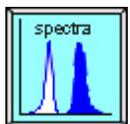
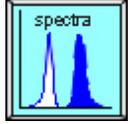
CryptoFluor-2	Cryptofluor-2 has excitation characteristics and brightness similar to APC. For sample data go here .	streptavidin		HeNe 632 nm 660/20 NBP	Intergen Martek Biosciences Corporation
CryptoFluor-3	Cryptofluor-3 has excitation/emission characteristics similar to Cy3 and is approximately as bright. For sample data go here .	streptavidin		Kr 530 nm 585/22 NBP	Intergen Martek Biosciences Corporation
CryptoFluor-4	Cryptofluor-3 has excitation/emission characteristics similar to Cy3 and is approximately as bright as APC. For sample data go here .	streptavidin anti-mouse IgG		Kr 530 nm 585/22 NBP	Intergen Martek Biosciences Corporation
CryptoFluor-5	Cryptofluor-5 has excitation/emission characteristics similar to lissamine rhodamine and is approximately as bright as APC. For sample data go here .	streptavidin		Kr 568 nm 610/30 NBP HQ	Intergen Martek Biosciences Corporation
Cy2	Cy2 is optimally excited by a blue-green laser line (such as our argon-ion lasers at 488 nm), and emits at approximately the same peak as FITC (530 nm). It is a quench-resistant, low molecular weight fluorochrome that can be used for both extracellular and intracellular applications.	streptavidin anti-mouse IgG		Ar 488 nm 530/30 NBP	Amersham (labeling kits) Caltag (avidin and secondary antibodies) Jackson ImmunoResearch (secondary reagents)
Cy3	Cy3 is optimally excited by a green laser (such as our argon-ion or krypton-ion lasers tuned to the low to mid-500s), and emits at	streptavidin anti-mouse IgG		Ar 514.5 nm or Kr 520 nm 575/22 NBP	Amersham (labeling kits) Jackson ImmunoResearch (secondary reagents)

	<p>approximately the same peak as PE (575 nm). It is a quench-resistant, low molecular weight fluorochrome that can be used for both extracellular and intracellular applications.</p>	<p>anti-rabbit IgG</p>		<p>NBP</p>	<p>(secondary reagents)</p> <p>Research Organics (reactive form)</p>
<p>Cy5</p>	<p>A 630 nm-excited, red fluorochrome that can be used interchangeably with APC for four-, five- and six-color experiments. Cy5 is slightly dimmer than APC but its lower molecular weight makes it useful for intracellular labeling. Its emission strength is comparable to FITC, but appears brighter due to the lower autofluorescence generated by the diode and HeNe lasers. We can also help you perform Cy5 conjugations via amine modification chemistry. For sample data, go here.</p>	<p>anti-mouse IgG</p> <p>anti-mouse IgM</p> <p>anti-rat IgG</p> <p>anti-rabbit IgG</p> <p>anti-hCD3</p> <p>anti-mCD8</p> <p>avidin</p>		<p>HeNe 632 nm</p> <p>675/20 NBP</p>	<p>Amersham (labeling kits)</p> <p>Fluka (reactive form)</p> <p>Jackson ImmunoResearch (secondary reagents)</p> <p>Research Organics (reactive form)</p>
<p>Marina Blue</p>	<p>Marina Blue is a UV-excited, blue-emitting fluorochrome similar to AMCA. Although dimmer than most of the above fluorochromes, it can be conjugated to antibodies against strongly expressed antigens, or used in secondary antibody or biotin-avidin labeling systems for signal enhancement.</p>	<p>streptavidin</p>		<p>HeCad 325 nm, Ar 335 nm or Kr 351/357 nm or</p> <p>424/44 or 440/10 NBP</p>	<p>Molecular Probes (secondary reagents and reactive form)</p>

<p>Oregon Green 488</p>	<p>This modified fluorescein molecule is brighter and more photostable than fluorescein and is particularly useful for intracellular labeling applications where quench-resistant labels are desired. For sample data using these bright, quench-resistant fluorochromes, go here.</p>	<p>anti-mouse IgG</p>		<p>Ar 488 nm 530/30 nm NBP</p>	<p>Molecular Probes (secondary reagents and reactive form)</p>
<p>Pacific Blue</p>	<p>Pacific Blue is optimally excited using a violet laser line and emits in the blue. Its spectral characteristics are similar to Cascade Blue.</p>	<p>streptavidin</p>		<p>Kr 407 or 413 nm, violet diode 408 nm 440/10 NBP</p>	<p>Molecular Probes (secondary reagents and reactive form)</p>
<p>PBXL-1</p>	<p>The PBXL fluorochromes are fluorescent stabilized photosystem II antennae complex derived from cyanobacteria. These complexes can be conjugated to antibodies and other proteins and are extremely bright, making them useful for the detection of poorly expressed antigens. PBXL-1 can be excited by an argon-ion 488 nm or 514.5 nm laser and emits in the far red (around 660 nm). For sample data, go here.</p>	<p>streptavidin</p>		<p>Ar 488 or 514.5 nm or Kr 520 nm 660/20 nm NBP</p>	<p>Intergen Kirkegaard & Perry Laboratories Martek Biosciences Corporation</p>
<p>PBXL-3 PBXL-3-PEG</p>	<p>PBXL-3 is excited by a diode or helium neon laser and also emits in the far red. It can also be detected using an APC filter. For sample data, go here.</p>	<p>streptavidin</p>		<p>HeNe 632 nm 660/20 NBP</p>	<p>Intergen Kirkegaard & Perry Laboratories Martek</p>

					Biosciences Corporation
PE-Texas Red	A 488 nm-excited red fluochrome, PE-Texas Red is a tandem conjugate. PE-Texas Red can be used simultaneously with APC or Cy5 on the FACSVantage with minimal crossbeam compensation, as illustrated here . This makes it useful for four-, five- and six-color analysis experiments. No longer available from Life Technologies.	streptavidin		Ar 488 nm 610/20 or 630/22 nm NBP	Molecular Probes (avidin and secondary reagents) Immunotech (avidin and direct conjugates) Caltag (avidin and direct conjugates)
PE-Alexa Fluor 610	This tandem conjugate of PE and the Molecular Probes dye Alexa Fluor 610 is roughly analogous to PE-Texas Red, although with a slightly longer emission wavelength.	streptavidin		Ar 488 nm 610/20 or 630/22 nm NBP	Molecular Probes (avidin and secondary reagents)
PE-Alexa Fluor 647	A tandem conjugate of PE and the Molecular Probes Cy5 substitute Alexa Fluor 647. This tandem is essentially interchangeable with PE-Cy5 and is slightly brighter in our hands.	streptavidin		Ar 488 nm 675/20 NBP	Molecular Probes (avidin and secondary reagents)
PE-Alexa Fluor 680	A tandem conjugate of PE and the Molecular Probes Cy5.5 substitute Alexa Fluor 680. This tandem is can be used simultaneously with PE-Cy5 and PE-Cy7 for three-color labeling in addition to FITC and PE off an argon-ion laser.	streptavidin		Ar 488 nm 710/20 NBP	Molecular Probes (avidin and secondary reagents)

<p>PE-Cy7</p>	<p>This novel fluorochrome is similar to the tandem conjugate PE-Cy5 but emits even farther into the red (around 750 nm). It can be used simultaneously with APC with minimal crossbeam compensation, making it useful for four-, five- and six-color applications.</p>	<p>anti-mCD4 anti-hCD3 anti-hCD8 anti-hCD19 streptavidin</p>		<p>Ar 488 nm 748 LP</p>	<p>Caltag (avidin and direct conjugates)</p>
<p>PerCP</p>	<p>This fluorochrome can be excited by a 488 nm laser and emits in the red. Its relative moderate intensity (compared to PE-Cy5) makes it useful for three or four color analysis with FITC/PE or FITC/PE/APC with minimal compensation. Its susceptibility to photobleaching make it less useful when using more powerful lasers.</p>	<p>anti-mouse IgG</p>		<p>Ar 488 nm (50 mW or less) 650 LP (Calibur) or 675/20 NBP (Vantage)</p>	<p>BD Pharmingen (secondary reagents and direct conjugates)</p>
<p>PerCP-Cy5.5</p>	<p>This tandem conjugate excites at 488 nm and emits in the far red (around 710 nm). It can also be useful for three or four color analysis with FITC/PE or FITC/PE/APC with minimal compensation, although a filter modification may be necessary for benchtop instruments. It is less susceptible to photobleaching than PerCP. For sample data, go here.</p>	<p>avidin anti-human CD19 anti-human CD20</p>		<p>Ar 488 nm 650 LP (Calibur) or 710/20 NBP (Vantage SE)</p>	<p>BD Pharmingen (secondary reagents and direct conjugates)</p>

Rhodamine Red	A stabilized form of lissamine rhodamine, rhodamine red (usually with an X spacer arm) is excited with a yellow laser line and emits in the orange. Spectral characteristics are similar to Alexa Fluor 568 and CryptoFluor-5.	avidin		Kr 568 nm 610/20 nm NBP	Jackson ImmunoResearch (secondary reagents) Molecular Probes (secondary reagents and reactive form)
Texas Red	A low molecular weight fluorochrome ideally excited using yellow-orange laser sources (such as dye head lasers). It emits in the orange-red. Texas Red can be used for multicolor protocols in place of APC where the appropriate laser source is available; interference with PE-Cy5 is far less than with other red-excited probes.	streptavidin		CW dye head (590-620 nm) or HeNe 594 nm 630/22 nm NBP	Jackson ImmunoResearch (secondary reagents) Molecular Probes (secondary reagents and reactive form)

This list of corporations and their products is provided solely for the convenience of our users and the flow cytometry research community. It does not constitute an endorsement of either the company or their products (even if we do like 'em!).

This material was prepared by the Telford Lab for the NCI ETI Branch and its friends. Updated 10-1-01.