



iQue[®] 3 and iQue[®]
Screener Plus
Fluorochrome Chart

Simplifying Progress

SARTORIUS

Revealing Insight with Multiplexed Panels

Selecting the proper fluorochromes for multiplexing markers of cell phenotype and function in a single well is critical to resolve complex cellular research questions in order to efficiently characterize disease state.

Designing Multicolor Experiments is as Easy as 1, 2, 3:

1.

Know Your Instrument

- What are the number and type of lasers available?
- What detector | filter combinations are available to capture the signal?

This determines what labeling and detection reagents are possible to use on your system and how they will perform.

2.

Know Your Detection Reagents

- What laser wavelength excites them?
- What is the emission spectra?
- Does spillover exist between adjacent channels?
- How bright are they? What is their stain index?
- Beware that tandems and other dyes can degrade when exposed to light, temperature changes, or fixation.

This information will allow you to determine which fluorochrome will be best matched to which antigen or marker of interest.

3.

Know Your Biology







- Reserve the brightest fluorochromes for the lowest expressed antigens and vice versa.
- Avoid spillover of highly expressed antigens into detectors requiring high sensitivity.

Now, you have enough information to begin to answer your experimental questions by optimizing fluorochromes and dyes for your biology on your instrument.












iQue® 3 and iQue® Screener Plus Blue-Red Configuration

iQue® reagents are indicated in bold.

Laser Excitation	iQue® 3 and iQue® Screener Plus Fluorescence Detectors Filters	Detector	Fluorochromes	Fluorescent Proteins	Viability	Proliferation, Function, and Apoptosis	DNA and Cell Cycle
Blue 488 nm		BL1	FITC	eGFP	iQue® Cell Membrane Integrity (B Green) Dye Calcein AM LIVE DEAD® Fixable Green Zombie Green	iQue® Cell Proliferation and Encoding (B Green) Dye iQue® Human Caspase 3 7 Reagent	Vybrant® Dye Cycle Green Click-iT® Plus EdU Alexa Fluor 488
			Alexa Fluor® 488	eYFP			
			Horizon® BB515	Emerald			
				mNeon Green			
572 28		BL2	PE		PI	iQue® Human Annexin V Reagent iQue Qbeads® Plexscreen SYTOX® Orange	PI
			eFluor® 570				
675 30		BL4	PerCP-Cy™5, Cy5.5		iQue® Cell Membrane Integrity (B Red) Dye 7AAD PI		iQue® Cell Cycle Kit PI
			PE-Cy5, Cy5.5				
			eFluor PE-Alexa Fluor 647				
			PerCp-Vio700®				
780 60		BL5	PE-Cy7 PE-Vio770®				
Red 640 nm		RL1	APC		iQue® Cell Membrane Integrity (R Red) Dye FVD eFluor 660 LIVE DEAD® Fixable Far Red	iQue® Cell Proliferation and Encoding (R Red) Dye iQue Qbeads® Plexscreen iQue Qbeads® Devscreen SH, sAV	DRAQ®5 Click-iT Plus EdU Alexa Fluor 647 FxCycle Far Red
			Alexa Fluor 647				
			APC-Alexa Fluor 680				
780 60		RL2	APC-Alexa Fluor 750		FVD eFluor 780 LIVE DEAD® Fixable Near IR	iQue Qbeads® Plexscreen iQue Qbeads® Devscreen SH, sAV	Vybrant DyeCycle Ruby
			APC-Cy7				
			APC-Vio770				

iQue® 3 and iQue® Screener Plus Violet-Blue-Red Configuration

iQue® reagents are indicated in bold.









Laser Excitation	iQue® 3 and iQue® Screener Plus Fluorescence Detectors Filters	Detector	Fluorochromes	Fluorescent Proteins	Viability	Proliferation, Function, and Apoptosis	DNA and Cell Cycle	
Violet 405 nm		VL1	Horizon BV421	eBFP	iQue® Cell Membrane Integrity (V Blue) Dye	iQue® Cell Proliferation and Encoding V Blue (Tag-it Violet™) Dye	DAPI	
			Pacific Blue	Azurite	Calcein Violet	CellTrace® Violet	FXCycle® Violet	
			Alexa Fluor 405	Cerulean	SYTOX® Blue	Click-iT Plus EdU-Pacific Blue	DyeCycle Violet	
					LIVE DEAD® Fixable Violet			
						DAPI		
530 30		VL2	Pacific Green	vGFP	LIVE DEAD® Fixable Aqua			
			Horizon BV510					
			VioGreen®					
572 28		VL3	Horizon BV570		LIVE DEAD® Fixable Yellow			
			Qdot® 605					
615 24		VL4	Horizon BV605					
			Qdot 625					
675 30		VL5	Horizon BV650					
			Qdot 655					
780 60		VL6	Horizon BV785					
Blue 488 nm		BL1	FITC	eGFP	iQue® Cell Membrane Integrity (B Green) Dye	iQue® Cell Proliferation and Encoding (B Green) Dye	Wybrant Dye Cycle Green	
			Alexa Fluor 488	eYFP	Calcein AM	iQue® Human Caspase 3 7 Reagent	Click-iT Plus EdU Alexa Fluor 488	
			Horizon BB515	Emerald	LIVE DEAD® Fixable Green			
				mNeon Green	Zombie Green			
572 28		BL2	PE		PI	iQue® Human Annexin V Kit	PI	
			eFluor 570			iQue Qbeads® Plexscreen		
615 24		BL3	Horizon PE-CF594			SYTOX® Orange		
			PE Dazzle® 594					
			PE-Texas Red					
			PE-Alexa Fluor 610					

iQue® reagents are indicated in bold.




Laser Excitation	iQue® 3 and iQue® Screener Plus Fluorescence Detectors Filters	Detector	Fluorochromes	Fluorescent Proteins	Viability	Proliferation, Function, and Apoptosis	DNA and Cell Cycle
Blue 488 nm	675 30 	BL4	PerCP-Cy5, Cy5.5 PE-Cy5, Cy5.5 eFluor PE-Alexa Fluor 647 PerCp-Vio700		7AAD PI	iQue® Cell Membrane Integrity (B Red) Dye	iQue® Cell Cycle Kit PI
	780 60 	BL5	PE-Cy7 PE-Vio770				
Red 640 nm	675 30 	RL1	APC Alexa Fluor 647 APC-Alexa Fluor 680		iQue® Cell Membrane Integrity (R Red) Dye FVD eFluor 660 LIVE DEAD® Fixable Far Red	iQue® Cell Proliferation and Encoding (R Red) Dye iQue Qbeads® Plexscreen iQue Qbeads® Devscreen SH, sAV	DRAQ5 Click-iT Plus EdU Alexa Fluor 647 FxCycle Far Red
	780 60 	RL2	APC-Alexa Fluor 750 APC-Cy7 APC-Vio770		FVD eFluor 780 LIVE DEAD® Fixable Near IR	iQue Qbeads® Plexscreen iQue Qbeads® Devscreen SH, sAV	Vybrant DyeCycle Ruby

iQue® 3 and iQue® Screener Plus Violet–Yellow–Blue Configuration

iQue® reagents are indicated in bold.

Laser Excitation	iQue® 3 and iQue® Screener Plus Fluorescence Detectors Filters	Detector	Fluorochromes	Fluorescent Proteins	Viability	Proliferation, Function, and Apoptosis	DNA and Cell Cycle	
Violet 405 nm		VL1	Horizon BV421	Azurite	iQue® Cell Membrane Integrity (V Blue) Dye	iQue® Cell Proliferation and Encoding V Blue (Tag-it Violet™) Dye	DAPI	
			Pacific Blue	Cerulean	Calcein Violet	Cell Trace Violet	FXCycle Violet	
			Horizon V450	eBFP	SYTOX® Blue	Click-iT Plus EdU	Vybrant	
			Alexa Fluor 405		LIVE DEAD® Fixable Violet	Pacific Blue	DyeCycle Violet	
						DAPI		
530 30		VL2	Pacific Green Horizon BV510	vGFP	LIVE DEAD® Fixable Aqua			
586 20		VL3	Horizon BV570 Qdot 605		LIVE DEAD® Fixable Yellow			
615 20		VL4	Horizon BV605 Qdot 625					
660 20		VL5	Horizon BV650 Qdot 655					
780 60		VL6	Horizon BV785					
Yellow 561 nm		YL1	PE Alexa Fluor 546	mStrawberry tdTomato AsRed 2 mRFP	LIVE DEAD® Fixable Red CellROX® Orange	iQue® Human Annexin V Kit	Vybrant DyeCycle Orange Click-iT Plus EdU Alexa Fluor 594	
			Horizon PE-CF594 PE Dazzle 594 PE-Texas Red PE-Alexa Fluor 610	mCherry HcRed mRuby mStrawberry		Cell Tracker Orange Cell Tracker Red	SYTOX® AADvanced™ DRAQ7	
			PE-Cy5, Cy5.5 eFluor PE- Alexa Fluor 647	mPlum			DRAQ5 Vybrant DyeCycle Ruby	
780 60		YL4	PE-Cy7 PE-Alexa 750 PE-Vio770					

iQue® reagents are indicated in bold.

Laser Excitation	iQue® 3 and iQue® Screener Plus Fluorescence Detectors Filters	Detector	Fluorochromes	Fluorescent Proteins	Viability	Proliferation, Function, and Apoptosis	DNA and Cell Cycle
Blue 488 nm		BL1	Horizon BB515 FITC Alexa Fluor 488	eGFP eYFP Emerald mNeon Green	iQue® Cell Membrane Integrity (B Green) Dye Calcein AM LIVE DEAD® Fixable Green Zombie Green	iQue® Cell Proliferation and Encoding (B Green) Dye iQue® Human Caspase 3 7 Reagent	Vybrant Dye Cycle Green Click-iT Plus EdU Alexa Fluor 488
		BL3	Horizon PE-CF594 PE Dazzle 594 PE-Texas Red PE-Alexa Fluor 610				
		BL4	PerCP PerCp-Cy5, Cy5.5 PE-Cy5, Cy5.5 PerCp-Vio700		iQue® Cell Membrane Integrity (B Red) Dye 7AAD PI		iQue® Cell Cycle Kit PI

The iQue® technology is protected by the following patents and other patents pending:
6,890,487, 6,878,556, 7,368,084, 7,842,244, 8,021,872,
8,268,571, 8,637,261, 8,823,943, 9,012,235, D,722,515

 Find out more
www.sartorius.com

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Learn why iQue® is the choice of leaders in Immuno-Oncology, Antibody Discovery and Immune Target Screening. For more information or a quote, call us at +1 505 345 9075 or email at sales@intellicyt.com

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