

Fluorophore selection guide for flow cytometry



Excitation laser	Common emission filters (nm)	Channel	Recommended dyes	Viability dyes (compatible with fixation)	Viability dyes (non-fixed cells)	DNA content/ cell cycle dyes (live cells)	DNA content/ cell cycle dyes (fixed cells)	Apoptosis dyes	Cell proliferation dyes	ROS detection dyes	Phagocytosis dyes	Fluorescent proteins	Other dyes
Violet (405 nm)	425/20 440/50* 450/50 455/50 450/65 460/50	VL1	• Alexa Fluor™ 405 • Pacific Blue™	• LIVE/DEAD™ Fixable Violet	• DAPI • SYTOX™ Blue	• Vybrant™ DyeCycle™ Violet	• FxCycle™ Violet	• Annexin V Pacific Blue™ • PO-PRO™-1	• CellTrace™ Violet • Click-iT™ Plus EdU Pacific Blue™			• Azurite • Cerulean • eBFP • eCFP • mTurquoise • Sirius	• BV421 • eFluor™ 450 • Horizon™ V450 • VioBlue™
	510/50 512/25* 520/35 525/50 530/40 542/50 550/40	VL2	• Pacific Green™	• LIVE/DEAD™ Fixable Aqua				• Violet Ratiometric Probe (F2N12S)				• vGFP	• AmCyan • BV510 • Horizon™ V500 • VioGreen™
	585/40 595/50 603/48* 610/20	VL3	• Pacific Orange™ • Qdot™ 605	• LIVE/DEAD™ Fixable Yellow					• Violet Ratiometric Probe (F2N12S)				• BV570 • BV605 • BV650 • eFluor™ 605NC
	710/50*	VL4	• Qdot™ 705										• BV650 • BV711
Blue (488 nm)	525/30 525/40 525/50 530/30* 530/40	BL1	• Alexa Fluor™ 488 • FITC	• LIVE/DEAD™ Fixable Green	• SYTOX™ Green	• Vybrant™ DyeCycle™ Green		• Annexin V Alexa Fluor™ 488 • Annexin V FITC • Anti-PARP FITC • APO-BrdU • TUNEL Alexa Fluor™ 488 • CellEvent™ Caspase-3/7 Green • MitoProbe™ DiOC ₂ (3) • MitoProbe™ JC-1 • YO-PRO™-1	• CellTrace™ CFSE • Click-iT™ Plus EdU Alexa Fluor™ 488	• CellROX™ Green	• pHrodo™ Green <i>E. coli</i> BioParticles™ conjugate • pHrodo™ Green <i>S. aureus</i> BioParticles™ conjugate	• eGFP • Emerald • eYFP	• BB515
	574/26* 575/30 580/23 585/40 586/15 590/40*	BL2	• PE • PE-Alexa Fluor™ 610 • PE-Texas Red™	• LIVE/DEAD™ Fixable Red	• 7-AAD • PI • SYTOX™ AADvanced™ • SYTOX™ Orange	• Vybrant™ DyeCycle™ Orange	• FxCycle™ PI/RNase	• Annexin V PE • MitoProbe™ JC-1 • TMRE • TMRM			• pHrodo™ Red <i>E. coli</i> BioParticles™ conjugate • pHrodo™ Red <i>S. aureus</i> BioParticles™ conjugate	• eYFP • mCitrine • Venus	• PE-eFluor™ 610
	670/30 675/30 680/30 695/30 695/40*	BL3	• PE-Alexa Fluor™ 700 • PE-Cy ⁵ 5 • PerCP • PerCP-Cy ⁵ 5 • Qdot™ 705 • TRI-COLOR™		• 7-AAD • PI • SYTOX™ AADvanced™								• PE-CF594 • PE-Dazzle™ 594 • PerCP-eFluor™ 710 • PerCP-Vio700™ • VioGreen™ • Vio770™
	750 LP 775/50 780/40 780/60* 785/70	BL4	• PE-Cy ⁷ • Qdot™ 800			• Vybrant™ DyeCycle™ Ruby							
Yellow (561 nm)	585/40 586/15 590/40*	YL1	• PE		• PI • SYTOX™ Orange	• Vybrant™ DyeCycle™ Orange		• Annexin V Alexa Fluor™ 568 • Annexin V Alexa Fluor™ 594 • MitoTracker™ Orange CMTMRos • MitoTracker™ Red CMXRos • TMRE • TMRM		• CellROX™ Orange		• dTomato • mOrange • RFP	
	610/20 613/20 615/60 620/15* 620/30	YL2	• PE-Alexa Fluor™ 610 • PE-Texas Red™		• 7-AAD • PI • SYTOX™ AADvanced™ • SYTOX™ Orange		• FxCycle™ PI/RNase					• DsRed • mCherry • mKate • mStrawberry	• ECD • PE-CF594 • PE-Dazzle™ 594 • PE-eFluor™ 610 • PE-Vio™ 610 • Texas Red™
	670/30 675/30 680/30 695/30 695/40*	YL3	• PE-Alexa Fluor™ 700 • PE-Cy ⁵ 5 • Qdot™ 705 • TRI-COLOR™		• 7-AAD • PI • SYTOX™ AADvanced™								
	750 LP 775/50 780/40 780/60* 785/70	YL4	• PE-Cy ⁷ • Qdot™ 800			• Vybrant™ DyeCycle™ Ruby							• PE-Vio770™
Red (637 nm)	660/20 661/20 665/20 670/14* 670/30 675/30	RL1	• Alexa Fluor™ 647 • APC • Qdot™ 655	• LIVE/DEAD™ Fixable Far Red	• SYTOX™ Red		• FxCycle™ Far Red	• Annexin V Alexa Fluor™ 647 • Annexin V Alexa Fluor™ 680 • Annexin V APC • MitoProbe™ DiIC ₁ (5) • TO-PRO™-3	• CellTrace™ Far Red • Click-iT™ Plus EdU Alexa Fluor™ 647	• CellROX™ Deep Red			• eFluor™ 660
	720/30* 730/45	RL2	• Alexa Fluor™ 680 • Alexa Fluor™ 700 • APC-Alexa Fluor™ 700 • Qdot™ 705										
	750 LP 775/50 780/40 780/60* 785/70	RL3	• APC-Alexa Fluor™ 750 • APC-Cy ⁷	• LIVE/DEAD™ Fixable Near-IR		• Vybrant™ DyeCycle™ Ruby							• APC-H7 • APC-eFluor™ 750 • APC-eFluor™ 780 • APC-Vio770™

*Bandpass filters found on the Attune™ NxT Acoustic Focusing Cytometer.

Find out more at [thermofisher.com/mpflow](https://www.thermofisher.com/mpflow)

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