

Fluorophore selection guide

Cytek Aurora flow cytometer and Cytek Aurora CS System

Cytek Aurora™ flow cytometer and Cytek Aurora™ CS System					
Laser	Channel	Channel start–end (nm)	Recommended Invitrogen™ dyes for antibody conjugates	Abs/Em (nm)	Relative brightness
Ultraviolet 355 nm	UV1	365–380			
	UV2	380–395	Brilliant Ultra Violet™ 395 Dye	347/399	Low
	UV3–UV6	420–481			
	UV7	500–528	Brilliant Ultra Violet™ 496 Dye	348/493	Medium
	UV8	528–556	Brilliant Ultra Violet™ 563 Dye	349/563	Medium
	UV9	566–597			
	UV10	597–628	Brilliant Ultra Violet™ 615 Dye	350/607	High
	UV11	651–678	Brilliant Ultra Violet™ 661 Dye	349/659	High
	UV12–UV13	677–735			
	UV14	735–765	Brilliant Ultra Violet™ 737 Dye	350/740	High
	UV15	765–795	eBioscience™ NovaFluor™ UV 765 Dye	358/763	Medium
	UV16	795–829	Brilliant Ultra Violet™ 805 Dye	349/804	Medium
Violet 405 nm	V1	421–436	Brilliant Violet™ 421 Dye	406/423	High
	V2	436–451	eBioscience™ Super Bright™ 436 Dye	413/431	High
	V3	451–466	eBioscience™ eFluor™ 450 Dye	405/445	Low
	V4	466–481	Brilliant Violet™ 480 Dye	437/478	Medium
	V5–V6	498–534			
	V7	534–551	eBioscience™ eFluor™ 506 Dye	419/508	Low
	V8	572–591	Pacific Orange™ Dye	400/551	Low
	V9	588–608			
	V10	605–625	eBioscience™ Super Bright™ 600 Dye Brilliant Violet™ 605 Dye	414/601 405/605	Low Medium
	V11	651–678	eBioscience™ Super Bright™ 645 Dye Brilliant Violet™ 650 Dye	414/645 407/646	Low High
	V12	678–706	eBioscience™ NovaFluor™ Violet 690 Dye	408/691	Medium
	V13	706–735	eBioscience™ Super Bright™ 702 Dye Brilliant Violet™ 711 Dye	413/702 406/711	Medium Low
	V14	735–765	eBioscience™ NovaFluor™ Violet 745 Dye	391/743	Low
	V15	765–795	eBioscience™ Super Bright™ 780 Dye Brilliant Violet™ 786 Dye	413/780 406/788	High High
	v16	795–829	eBioscience™ NovaFluor™ Violet 800 Dye	408/800	Low
Blue 488 nm	B1	498–518	eBioscience™ NovaFluor™ Blue 510 Dye	493/513	Medium
	B2	517–534	Alexa Fluor™ 488 Dye Fluorescein (FITC) Dye	490/520 489/517	Medium Medium
	B3	534–551	eBioscience™ NovaFluor™ Blue 555 Dye Alexa Fluor™ 532 Dye	493/555 534/553	Low Low
	B4	572–591			
	B5	588–608	eBioscience™ NovaFluor™ Blue 585 Dye	493/586	Low
	B6	605–625	eBioscience™ NovaFluor™ Blue 610-30S Dye eBioscience™ NovaFluor™ Blue 610-70S Dye	492/616 492/616	Low Medium
	B7	652–669	eBioscience™ NovaFluor™ Blue 660-40S Dye eBioscience™ NovaFluor™ Blue 660-120S Dye	508/664 508/664	Low Medium
	B8	669–687	PerCP	482/675	Low
	B9	688–707	eBioscience™ NovaFluor™ Blue 690 Dye eBioscience™ PerCP-Cyanine5.5 Dye	494/690 489/679	Low Low
	B10	707–727	eBioscience™ PerCP-eFluor™ 710 Dye	482/708	High
	B11	728–749	eBioscience™ NovaFluor™ Blue 725 Dye	492/725	Medium
	B12	749–772			
	B13	772–795	eBioscience™ NovaFluor™ Blue 760 Dye	490/764	Medium
	B14	795–829	eBioscience™ NovaFluor™ Blue 800 Dye	493/806	High
Yellow-green 561 nm	YG1	567–587	eBioscience™ NovaFluor™ Yellow 570 Dye R-phycoerythrin (R-PE) Dye Alexa Fluor™ 561 Dye	551/566 565/576 556/569	Medium High High
	YG2	588–608	eBioscience™ NovaFluor™ Yellow 590 Dye	563/594	High
	YG3	605–625	eBioscience™ NovaFluor™ Yellow 610 Dye	551/614	High
	YG4	652–669	eBioscience™ PE-eFluor™ 610 Dye	565/606	High
	YG5	669–687	eBioscience™ NovaFluor™ Yellow 660 Dye eBioscience™ PE-Cyanine5 Dye	550/664 565/680	High High
	YG6	688–707	eBioscience™ NovaFluor™ Yellow 690 Dye eBioscience™ PE-Cyanine5.5 Dye	551/691 565/700	High High
	YG7	706–735	eBioscience™ NovaFluor™ Yellow 700 Dye eBioscience™ NovaFluor™ Yellow 730 Dye PE–Alexa Fluor™ 700 Dye	551/701 551/730 565/719	High Medium High
	YG8	735–765			
	YG9	765–795	eBioscience™ NovaFluor™ Yellow 755 Dye PE-Cyanine7 Dye	552/755 569/780	Medium High
	YG10	795–829	eBioscience™ NovaFluor™ Yellow 810 Dye	551/813	High
Red 640 nm	R1	652–669	Allophycocyanin (APC)	651/660	High
	R2	669–687	eBioscience™ eFluor™ 660 Dye Alexa Fluor™ 647 Dye	651/668 650/671	High Medium
	R3	688–707	eBioscience™ NovaFluor™ Red 685 Dye Alexa Fluor™ 660 Dye	637/685 663/691	High Medium
	R4	707–727	eBioscience™ NovaFluor™ Red 710 Dye Alexa Fluor™ 700 Dye	637/713 696/719	High Medium
	R5	728–749	eBioscience™ NovaFluor™ Red 725 Dye	636/725	High
	R6	749–772	eBioscience™ NovaFluor™ Red 755 Dye	636/755	High
	R7	772–795	eBioscience™ APC-eFluor™ 780 Dye	651/785	High
	R8	795–829			

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Fluorescent reagent selection guide

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Laser	Channel	Channel start–end (nm)	Invitrogen™ functional reagents	Abs/Em (nm)	Reagent category
Ultraviolet 355 nm	UV1	365–380			
	UV2	380–395	CellTrace™ Blue Cell Proliferation Kit	355/410	Proliferation tracking stain
	UV3	420–435			
	UV4	436–451	Vybrant™ DyeCycle™ Violet Stain	369/437	DNA stain
	UV5	451–466	Annexin V–Alexa Fluor™ 350 Conjugate	343/441	Apoptosis tracking stain
			Click-iT™ Plus EdU Alexa Fluor™ 350 Flow Cytometry Assay Kit	343/441	DNA stain
			FxCycle™ Violet Stain	358/461	DNA stain
	UV6	466–481	LIVE/DEAD™ Fixable Blue Dead Cell Stain	350/450	Fixable viability stain
Violet 405 nm	UV7	500–528	DAPI (4',6-diamidino-2-phenylindole)	358/461	DNA stain
	UV8–UV16	528–829	Hoechst 33342	361/497	DNA stain
	V1–V2	421–451			
	V3	451–466	eBioscience™ Annexin V–eFluor™ 450 Conjugate	405/445	Apoptosis tracking stain
			LIVE/DEAD™ Fixable Violet Dead Cell Stain	416/451	Fixable viability stain
			CellTrace™ Violet Cell Proliferation Kit	405/450	Proliferation tracking stain
			Annexin V–Pacific Blue™ Conjugate	404/455	Apoptosis tracking stain
			PO-PRO™-1 Iodide Nucleic Acid Stain	435/455	DNA stain
			Click-iT™ Plus EdU Pacific Blue™ Flow Cytometry Assay Kit	404/455	DNA stain
	V4	466–481	SYTOX™ Blue Nucleic Acid Stain	444/480	DNA stain
	V5	498–518	LIVE/DEAD™ Fixable Lime (506) Viability Kit	405/506	Fixable viability stain
	V6	517–534	Violet Ratiometric Membrane Asymmetry Probe/Dead Cell Apoptosis dye	425/530, 585	Apoptosis tracking stain
	V7	534–551	LIVE/DEAD™ Fixable Aqua Dead Cell Stain	375/526	Fixable viability stain
Blue 488 nm	V8	572–591	LIVE/DEAD™ Fixable Yellow Dead Cell Stain	400/575	Fixable viability stain
	V9–V16	588–829			
	B1	498–518	MitoProbe™ DiOC ₂ (3) Assay Kit	482/497	Mitochondria stain
			YO-PRO™-1 Iodide Nucleic Acid Stain	491/509	DNA stain
			CellTrace™ CFSE Cell Proliferation Kit	495/519	Proliferation tracking stain
			Annexin V–FITC Conjugate	498/517	Apoptosis tracking stain
			Annexin V–Alexa Fluor™ 488 Conjugate	499/520	Apoptosis tracking stain
			APO-BrdU™ TUNEL Assay Kit with Alexa Fluor™ 488 Anti-BrdU	499/520	DNA stain, apoptosis tracking stain
			Click-iT™ Plus EdU Alexa Fluor™ 488 Flow Cytometry Assay Kit	499/520	DNA stain
			CellROX™ Green Reagent	485/520	Oxidation tracking stain
			MitoProbe™ JC-1 Assay Kit	514/529, 590	Mitochondria stain
			pHrodo™ Green Maleimide <i>E. coli</i> BioParticles Conjugate	509/533	Endocytosis tracking stain
	B2	517–534	pHrodo™ Green Maleimide <i>S. aureus</i> BioParticles Conjugate	509/533	Endocytosis tracking stain
			CellEvent™ Caspase-3/7 Green Detection Reagent	502/530	Apoptosis tracking stain
			Vybrant™ DyeCycle™ Green Stain	506/534	DNA stain
			LIVE/DEAD™ Fixable Green Dead Cell Stain	495/520	Fixable viability stain
			SYTOX™ Green Nucleic Acid Stain	504/523	DNA stain
	B3	534–551	LIVE/DEAD™ Fixable Olive Viability Stain	480/557	Fixable viability stain
	B4	572–591	Vybrant™ DyeCycle™ Orange Stain	519/563	DNA stain
	B5–B9	588–707			
	B10	707	eBioscience™ Annexin V–PerCP–eFluor™ 710 Conjugate	482/708	Apoptosis tracking stain
	B11–B14	728–829			
Yellow-green 561 nm	YG1	567–587	CellROX™ Orange Flow Cytometry Stain	545/565	Oxidation tracking stain
			Annexin V–Alexa Fluor™ 555 Conjugate	553/568	Apoptosis tracking stain
			SYTOX™ Orange Nucleic Acid Stain	547/570	DNA stain
			Tetramethylrhodamine, Ethyl Ester, Perchlorate (TMRE)	549/574	Mitochondria stain
			Tetramethylrhodamine, Methyl Ester, Perchlorate (TMRM)	549/574	Mitochondria stain
			Annexin V–PE Conjugate	565/576	Apoptosis tracking stain
			CellTrace™ Yellow Cell Proliferation Kit	546/579	Proliferation tracking stain
			pHrodo™ Red Maleimide <i>E. coli</i> BioParticles Conjugate	560/585	Endocytosis tracking stain
			LIVE/DEAD™ Fixable Orange (602) Viability Kit	580/602	Fixable viability stain
			Annexin V–Alexa Fluor™ 568 Conjugate	579/603	Apoptosis tracking stain
Yellow-green 561 nm	YG2	588–608	LIVE/DEAD™ Fixable Red Dead Cell Stain	595/615	Fixable viability stain
	YG3	605–625	FxCycle™ PI/RNase Staining Solution	535/617	DNA stain
			Annexin V–Alexa Fluor™ 594 Conjugate	590/618	Apoptosis tracking stain
			Click-iT™ Plus EdU Alexa Fluor™ 594 Flow Cytometry Assay Kit	590/618	DNA stain
			Propidium Iodide	535/617	DNA stain
	YG4	652–669	7-AAD (7-Aminoactinomycin D)	546/647	Viability stain
	YG5–YG8	669–765	SYTOX™ AADvanced™ Dead Cell Stain	535/647	DNA stain
Red 640 nm	R1	652–669	eBioscience™ Annexin V–PE-Cyanine7 Conjugate	569/780	Apoptosis tracking stain
			pHrodo™ Deep Red Mammalian and Bacterial Cell Labeling Kit	640/655	Endocytosis tracking stain
			SYTOX™ Red Dead Cell Stain	640/658	DNA stain
			MitoProbe™ DiIC ₁ (5) Assay Kit	638/658	Mitochondria stain
			Annexin V–APC (Allophycocyanin)	651/660	Apoptosis tracking stain
			TO-PRO™-3 Ready Flow™ Reagent	642/661	DNA stain
			CellTrace™ Far Red Cell Proliferation Kit	630/661	Proliferation tracking stain
			CellROX™ Deep Red Reagent	644/665	Oxidation tracking stain
			LIVE/DEAD™ Fixable Far Red Dead Cell Stain Kit	650/665	Fixable viability stain
	R2	669–687	FxCycle™ Far Red Stain	633/660	DNA stain
			Annexin V–Alexa Fluor 647 Conjugate	650/671	Apoptosis tracking stain
			Click-iT™ Plus EdU Alexa Fluor™ 647 Flow Cytometry Assay Kit	650/671	DNA stain
			SYTOX™ Deep Red Nucleic Acid Stain	660/682	DNA stain
			Vybrant™ DyeCycle™ Ruby Stain	638/686	DNA stain
	R3	688–707	DRAQ5™ Fluorescent Probe Solution (5 mM)	646/697	DNA stain
	R4	707–727	DRAQ7™ Dye	646/697	DNA stain
	R5–R6	728–772	Annexin V–Alexa Fluor™ 680 Conjugate	681/704	Apoptosis tracking stain
	R7	772–795	LIVE/DEAD™ Fixable Scarlet (723) Viability Stain	700/775	Fixable viability stain
			LIVE/DEAD™ Fixable Near-IR Dead Cell Stain	750/780	Fixable viability stain
	R8	795–829			

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