

Fluorophore selection guide

SONY ID7000 Spectral Cell Analyzer

SONY ID7000™ Spectral Cell Analyzer					
Laser	Channel	Channel start–end (nm)	Recommended Invitrogen™ dye for antibody conjugates	Abs/Em (nm)	Relative brightness
DUV 320 nm	DUV1–DUV34, DUV35	375–839, 840LP			
Ultraviolet 355 nm	UV1	375–419	Brilliant Ultra Violet™ 395 Dye	347/399	Low
	UV2	420–449			
	UV3	450–495	Brilliant Ultra Violet™ 496 Dye	348/493	Medium
	UV4–UV10	496–572			
	UV11	573–583	Brilliant Ultra Violet™ 563 Dye	349/563	Medium
	UV12–UV13	584–606			
	UV14	607–617	Brilliant Ultra Violet™ 615 Dye	350/607	High
	UV15–UV17	618–650			
	UV18	651–661	Brilliant Ultra Violet™ 661 Dye	349/659	High
	UV19–UV24	662–728			
	UV25	729–739	Brilliant Ultra Violet™ 737 Dye	350/740	High
	UV26–UV27	740–761			
	UV28	762–772	eBioscience™ NovaFluor™ UV 765 Dye	358/763	Medium
	UV29–UV30	773–794			
	UV31	795–805	Brilliant Ultra Violet™ 805 Dye	349/804	Medium
Violet 405 nm	UV32–UV34, UV35	806–839, 840LP			
	V1	420–449	Brilliant Violet™ 421 Dye	406/423	High
	V2	450–469	eBioscience™ eFluor™ 450 Dye	405/445	Low
	V3	470–495			
	V4	496–506	Brilliant Violet™ 480 Dye eBioscience™ eFluor™ 506 Dye	437/478 419/508	Medium Low
	V5–V6	507–528			
	V7	529–539	Pacific Orange™ Dye	400/551	Low
	V8–V12	540–594			
	V13	595–606	Brilliant Violet™ 605 Dye	407/605	Medium
	V14–V16	607–639			
	V17	640–650	eBioscience™ Super Bright™ 645 Dye	414/645	Low
	V18	651–661	Brilliant Violet™ 650 Dye	407/646	High
	V19–V20	662–683			
	V21	684–694	eBioscience™ NovaFluor™ Violet 690 Dye	408/691	High
	V22	695–705	eBioscience™ Super Bright™ 702 Dye	413/702	Medium
	V23	685–735	Brilliant Violet™ 711 Dye	406/711	Low
	V24–V25	718–739			
	V26	740–750	eBioscience™ NovaFluor™ Violet 745 Dye	391/743	Low
	V27–V29	751–783			
	V30	784–794	Brilliant Violet™ 786 Dye	406/788	High
Blue 488 nm	V31	795–805	eBioscience™ NovaFluor™ Violet 800 Dye	408/800	Low
	V32–V34, V35	806–839, 840LP			
	B1	505–515	eBioscience™ NovaFluor™ Blue 510 Dye	496/511	Medium
	B2	516–526			
	B3	527–537	Fluorescein (FITC)	498/517	Medium
	B4	538–548			
	B5	549–558	eBioscience™ NovaFluor™ Blue 555 Dye	493/555	Low
	B6–B7	559–580			
	B8	581–591	eBioscience™ NovaFluor™ Blue 585 Dye	493/586	Low
	B9–B10	592–612			
	B11	613–623	eBioscience™ NovaFluor™ Blue 610-70S Dye	492/616	Medium
	B12–B14	624–656			
	B15	657–666	eBioscience™ NovaFluor™ Blue 660-120S Dye	492/665	Medium
	B16	667–677	PerCP	482/675	Low
	B17	678–688			
	B18	689–699	eBioscience™ NovaFluor™ Blue 690 Dye	494/690	Low
	B19	700–710			
	B20	711–720	PerCP-eFluor™ 710 Dye	482/708	High
	B21	721–731	eBioscience™ NovaFluor™ Blue 725 Dye	493/726	Medium
	B22–B24	732–764			
Yellow- green 561 nm	B25	765–774	eBioscience™ NovaFluor™ Blue 760 Dye	490/764	Medium
	B26–B27	775–796			
	B28	797–807	eBioscience™ NovaFluor™ Blue 800 Dye	493/806	High
	B29–B31, B32	808–839, 840LP			
	YG1	575–585	eBioscience™ NovaFluor™ Yellow 570 Dye	551/566	Medium
	YG2	586–596	R-phycoerythrin (R-PE)	565/576	High
	YG3	597–606			
	YG4	607–617	eBioscience™ NovaFluor™ Yellow 610 Dye	551/614	High
	YG5–YG7	618–649			
	YG8	650–659	eBioscience™ NovaFluor™ Yellow 660 Dye	550/664	High
	YG9	660–670	eBioscience™ PE-Cyanine5 Dye	565/680	High
	YG10	671–680	eBioscience™ NovaFluor™ Yellow 690 Dye	551/691	High
	YG11	681–691	eBioscience™ PE-Cyanine5.5 Dye	565/680	High
	YG12	692–702			
	YG13	703–712	eBioscience™ NovaFluor -Yellow 700 Dye	551/701	High
	YG14	713–723	PE-Alexa Fluor™ 700 Dye	565/719	Medium
	YG15	724–733	eBioscience™ NovaFluor™ Yellow 730 Dye	551/730	High
Red 640 nm	YG16–YG17	734–755			
	YG18	756–765	eBioscience™ NovaFluor™ Yellow 755 Dye	552/755	Medium
	YG19	766–776			
	YG20	777–786	PE-Cyanine7 Dye	569/780	High
	YG21–YG22	787–808			
	YG23	809–818	eBioscience™ NovaFluor™ Yellow 810 Dye	551/813	High
	YG24–YG25, YG26	819–839, 840LP			
	R1	655–664	eBioscience™ NovaFluor™ Red 660 Dye	637/658	High
	R2	665–675	Allophycocyanin (APC)	651/660	High
	R3	676–685	eBioscience™ NovaFluor™ Red 685 Dye	637/685	High
	R4	686–695	Alexa Fluor™ 660 Dye	663/691	Medium
	R5	696–705	eBioscience™ NovaFluor™ Red 700 Dye	637/701	High
	R6	706–716	eBioscience™ NovaFluor™ Red 710 Dye	637/713	High
IR 785nm	R7	717–726	eBioscience™ NovaFluor™ Red 725 Dye	636/725	High
	R8-R9	727–746			
	R10	747–757	eBioscience™ NovaFluor™ Red 755 Dye	636/755	High
	R11–R12	758–777			
	R13	778–787	eBioscience™ APC-eFluor™ 780 Dye	651/785	High
	R14–R18, R19	788–839, 840LP			
	IR1–IR2, IR3	808–879, 880LP			

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Reagent selection guide

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Laser	Channel	Channel start–end (nm)	Invitrogen™ functional reagent	Abs/Em (nm)	Reagent category
DUV 320 nm	DUV1–DUV34, DUV35	375–839, 840LP			
Ultraviolet 355 nm	UV1	375–419	CellTrace™ Blue Cell Proliferation Kit	355/410	Proliferation tracking stain
	UV2	420–449	Vybrant™ DyeCycle™ Violet Stain	369/437	DNA stain Apoptosis
	UV3	450–495	AnnexinV™ Alexa Fluor™ 350 Conjugate	343/441	tracking stain
			LIVE/DEAD™ Fixable Blue Dead Cell Stain	350/450	Fixable viability stain
			DAPI (4',6-diamidino-2-phenylindole)	358/461	DNA stain
Violet 405 nm	UV4 UV5–UV34, UV35	496–506	Hoechst 33342	361/497	DNA stain
	V1	420–449	Annexin V–Pacific Blue™ Conjugate	404/455	Apoptosis tracking stain
			CellTrace™ Violet Cell Proliferation Kit	405/450	Proliferation tracking stain
	V2	450–469	LIVE/DEAD™ Fixable Violet Dead Cell Stain	416/451	Fixable viability stain
			Annexin V–Pacific Blue™ Conjugate	404/455	Apoptosis tracking stain
			Click-iT™ Plus EdU Pacific Blue™ Flow Cytometry Assay Kit	404/455	DNA stain
	V3	470–495	SYTOX™ Blue Nucleic Acid Stain	444/480	DNA stain
	V4	496–506	LIVE/DEAD™ Fixable Lime (506) Viability Kit	405/506	Fixable viability stain
	V5	507–517			
	V6	518–528	LIVE/DEAD™ Fixable Aqua Dead Cell Stain	375/526	Fixable viability stain
	V7	529–539	Violet Ratiometric Membrane Asymmetry Probe/Dead Cell Apoptosis dye	425/530, 585	Apoptosis tracking stain
	V8-V10	540–572			
	V11	573–583	LIVE/DEAD™ Fixable Yellow Dead Cell Stain	400/575	Fixable viability stain
Blue 488 nm	V12–V34, V35	574–839, 840LP			
	B1	505–515	CellEvent™ Senescence Green Flow Cytometry Assay Kit	488/514	Mitochondria stain
			Vybrant™ DiO Cell-Labeling Solution	484/501	Lipophilic Tracer
	B2	516–526	CellROX™ Green Reagent	485/520	Oxidation tracking stain
			MitoTracker™ Green FM Dye, for flow cytometry	488/516	Mitochondria stain
	B3	527–537	Annexin V–FITC Conjugate	498/517	Apoptosis tracking stain
			CellTrace™ CFSE Cell Proliferation Kit	495/519	Proliferation tracking stain
			Annexin V–Alexa Fluor™ 488 Conjugate	499/520	Apoptosis tracking stain
			LIVE/DEAD™ Fixable Green Dead Cell Stain	495/520	Fixable viability 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
			MitoProbe™ JC-1 Assay Kit pHrodo™ Green Maleimide <i>E. coli</i>	514/529, 590	Mitochondria stain
			BioParticles Conjugate pHrodo™ Green Maleimide <i>S. aureus</i>	509/533	Endocytosis tracking stain
			BioParticles Conjugate CellEvent™ Caspase-3/7 Green	509/533	Endocytosis tracking stain
			Detection Reagent Vybrant™ DyeCycle™ Green Stain	502/530	Apoptosis tracking stain
				506/534	DNA stain
	B4	538–548			
	B5	549–558	LIVE/DEAD™ Fixable Olive Viability Stain	480/557	Fixable viability stain
	B6	559–569	Vybrant™ DyeCycle™ Orange Stain	519/563	DNA stain
	B7–B19	570–710			
	B20	711–720	eBioscience™ Annexin V–PerCP–eFluor™ 710 Conjugate	482/708	Apoptosis tracking stain
	B21–B31, B32	721–839, 840LP			
Yellow- green 561 nm	YG1	575–585	CellROX™ Orange Flow Cytometry Stain	545/565	Oxidation tracking stain
			Annexin V–Alexa Fluor™ 555 Conjugate	553/568	Apoptosis tracking stain
			MitoTracker™ Orange CMTMRos and Orange CMH2TMRos	554/576	Mitochondria stain
			Tetramethylrhodamine, Ethyl Ester, Perchlorate (TMRE)	549/574	Mitochondria stain
			Tetramethylrhodamine, Methyl Ester, Perchlorate (TMRM)	549/574	Mitochondria stain
			CellTrace™ Yellow Cell Proliferation Kit pHrodo™ Red	546/579	Proliferation tracking stain
	YG1	586–596	Maleimide <i>E. coli</i> BioParticles Conjugate	560/585	Endocytosis tracking stain
			Annexin V–PE Conjugate LIVE/DEAD™ Fixable	565/576	Apoptosis tracking stain
	YG3	597–606	Orange (602) Viability Kit	580/602	Fixable viability stain
			Annexin V–Alexa Fluor™ 568 Conjugate	579/603	Apoptosis tracking stain
	YG4	607–617			
			LIVE/DEAD™ Fixable Red Dead Cell Stain	595/615	Fixable viability stain
			FxCycle™ PI/RNase Staining Solution	535/617	DNA stain
			Annexin V–Alexa Fluor™ 594 Conjugate Click-iT™ Plus EdU	590/618	Apoptosis tracking stain
	YG5	618–627	Alexa Fluor™ 594 Flow Cytometry Assay Kit	590/618	DNA stain
			Propidium Iodide	535/617	DNA stain
Red 640 nm	YG6	628–638			
			7-AAD (7-Aminoactinomycin D) eBioscience™	546/647	Viability stain
			SYTOX™ AADvanced™ Dead Cell Stain	535/647	DNA stain
	YG7	639–649			
	YG8–YG24	650–776			
	YG25	777–839	Annexin V–PE-Cyanine7 Conjugate	569/780	Apoptosis tracking stain
	YG26	840LP			
	R1	655–664	pHrodo™ Deep Red Mammalian and Bacterial Cell Labeling Kit	640/655	Endocytosis tracking stain
			SYTOX™ Red Dead Cell Stain	640/658	DNA stain
			MitoProbe™ DiIC1(5) Assay Kit	638/658	Mitochondria stain
			FxCycle™ Far Red Stain	633/660	DNA stain
			CellTrace™ Far Red Cell Proliferation Kit	630/661	Proliferation tracking stain
	R2	665–675	Annexin V–APC (Allophycocyanin)	651/660	Apoptosis tracking stain
			LIVE/DEAD™ Fixable Far Red Dead Cell Stain Kit	650/665	Fixable viability stain
			CellROX™ Deep Red Reagent	644/665	Oxidation tracking stain
	R3	676–685	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
	R4	686–695	Vybrant™ DyeCycle-Ruby Stain	638/686	DNA stain
	R5	696–705	DRAQ5™ Fluorescent Probe Solution (5 mM)	646/697	DNA stain
			Annexin V–Alexa Fluor™ 680 Conjugate	681/704	Apoptosis tracking stain
	R6–R11	706–767			
	R12	768–777	LIVE/DEAD™ Fixable Scarlet (723) Viability Stain	700/775	Fixable viability stain
	R13	778–787	LIVE/DEAD™ Fixable Near-IR Dead Cell Stain	750/780	Fixable viability stain
	R14–R18, R19	788–839, 840LP			
IR 785nm	IR1	808–849			
	IR2	850–879	LIVE/DEAD™ Fixable Near IR (876) Viability Kit	849/876	Fixable viability stain
	IR3	880LP			

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