

CF™ Dye Quick Reference Table

Visible spectrum

Far-red

Near-infrared

CF™ dye	λ_{Ex} (nm)	λ_{Em} (nm)	Excitation source*	Replacement for	Advantages
CF™ 350	347	448	UV	Alexa Fluor® 350, AMCA, DyLight™ 350	<ul style="list-style-type: none"> Brightest blue fluorescent conjugates for 350 nm excitation Highly water-soluble and pH insensitive
CF™ 405S	404	431	405 nm laser	Alexa Fluor® 405, Cascade Blue®, DyLight™ 405	<ul style="list-style-type: none"> Better compatibility with common instruments Highly water-soluble and pH-insensitive
CF™ 405M	408	452	405 nm laser	BD Horizon™ V450, eFluor® 450, Pacific Blue®	<ul style="list-style-type: none"> More photostable than Pacific Blue® dye Less spill-over in the 525/50 green channel Highly water-soluble
CF™ 488A	490	515	488 nm laser	ATTO™ 488, Alexa Fluor® 488, Cy™2, DyLight™ 488, FAM, FITC, Fluorescein	<ul style="list-style-type: none"> Yields biologically more specific antibody conjugates and less spill-over fluorescence in the red channel than Alexa Fluor® 488 Extremely photostable Highly water-soluble and pH-insensitive
CF™ 543	541	560	532, 543, or 546 nm laser	Alexa Fluor® 546, Tetramethylrhodamine (TAMRA)	<ul style="list-style-type: none"> Significantly brighter than Alexa Fluor® 546 Highly water-soluble and pH-insensitive
CF™ 555	555	565	532, 543, 546, 555, or 568 nm laser	Alexa Fluor® 555, ATTO 550, Cy™3, DyLight™ 549, TRITC	<ul style="list-style-type: none"> Brighter than Cy™3
CF™ 568	562	583	532, 543, 546, 555, or 568 nm laser	Alexa Fluor® 568, ATTO 565, Rhodamine Red	<ul style="list-style-type: none"> Optimized for the 568 nm line of the Ar-Kr mixed-gas laser Brighter and more photostable than Alexa Fluor 568
CF™ 594	593	614	532, 543, 546, 555, or 568 nm laser	Alexa Fluor® 594, ATTO 594, DyLight™ 594, Texas Red™	<ul style="list-style-type: none"> Yields the brightest conjugates among spectrally similar dyes Extremely photostable
CF™ 620R	617	639	633 or 635 nm laser	LightCycler® Red 640	<ul style="list-style-type: none"> Highly fluorescent Extremely photostable and highly water-soluble
CF™ 633	630	650	633 or 635 nm laser	Alexa Fluor® 633, Alexa Fluor® 647, Cy™5, DyLight™ 633	<ul style="list-style-type: none"> Yields the brightest antibody conjugates among spectrally similar dyes when excited at 633 nm or the 635 nm Far more photostable than Alexa Fluor® 647 Highly water-soluble
CF™ 640R	642	662	633, 635, or 640 nm laser	Alexa Fluor® 647, ATTO 647N, Cy™5, DyLight™ 649	<ul style="list-style-type: none"> Has the best photostability among dyes with Cy™5-like spectra Yields highly fluorescent protein conjugates Very water-soluble and pH-insensitive
CF™ 647	650	665	633, 635, or 640 nm laser	Alexa Fluor® 647, ATTO 647N, Cy™5, DyLight™ 649	<ul style="list-style-type: none"> Brighter than Cy™ 5 Highly water-soluble and pH-insensitive
CF™ 660C	667	685	633, 635, or 640 nm laser	Alexa Fluor® 660	<ul style="list-style-type: none"> Much brighter and more photostable than Alexa Fluor® 660 Highly water-soluble and pH insensitive
CF™ 660R	663	682	633, 635, or 640 nm laser	Alexa Fluor® 660	<ul style="list-style-type: none"> Brighter than Alexa Fluor® 660 The most photostable 660 nm dye Highly water-soluble and pH insensitive
CF™ 680	681	698	680 or 685 nm laser	Alexa Fluor® 680, Cy™5.5, DyLight™ 680, IRDye® 680LT	<ul style="list-style-type: none"> The brightest among spectrally similar 680 nm dyes Superior signal-to-noise ratio in immunostaining Highly water-soluble and pH-insensitive Compatible with Li-COR Odyssey® System
CF™ 680R	680	701	680 or 685 nm laser	Alexa Fluor® 680, Cy™5.5, DyLight™ 680, IRDye® 680LT	<ul style="list-style-type: none"> The most photostable 680 nm dye Suitable for labeling nucleic acids and small biomolecules Highly water-soluble and pH-insensitive Compatible with Li-COR Odyssey® System
CF™ 750	755	777	680 or 685 nm laser	Alexa Fluor® 750, Cy™7, DyLight™ 750, APC-Alexa Fluor® 750, IRDye® 750	<ul style="list-style-type: none"> Exceptionally bright and stable Less immunogenic than competing dyes Better signal-to-noise ratio compared to APC-Alexa Fluor® 750 tandem dye with 633 nm excitation
CF™ 770	770	797	785 nm laser	DyLight™ 800, IRDye® 800CW	<ul style="list-style-type: none"> Exceptionally bright and stable Less immunogenic than competing dyes Compatible with Li-COR Odyssey® System
CF™ 790	784	806	785 nm laser	Alexa Fluor® 790	<ul style="list-style-type: none"> Exceptionally bright and stable Less immunogenic than competing dyes

*Visible and far red dyes can be excited by a UV light source for epifluorescence microscopy. Emission wavelengths longer than ~650 nm (far red and near-infrared) are not visible to the human eye.