

The following highlights the best combination of light sources and filters which can be used for common fluorescent dyes. The peak excitation (nm) and the peak emission (nm) are highlighted (+/-10nm) for each of the dyes. There are three lighting choices (1<sup>st</sup> to 3<sup>rd</sup>) and up to five choices for the filters (1st to 5th) to select from. Additionally, for some dyes, the spectrally similar dyes have been stated. This file can be used in conjunction with the "Product and Applications Selector".

Fluorescent Dyes	Peak Excitation (nm)	Peak Emission (nm)	Lighting (1st choice)	Lighting (2nd choice)	Lighting (3rd choice)	Filter (1st choice)	Filter (2nd choice)	Filter (3rd choice)	Filter (4th choice)	Filter (5th choice)	Spectrally Similar Dyes
AlexaFluor 647	650	665	Red (M)	Cy5 edge (if imaging 2 D gel)		filt 705 (M)	Cy5 (if using edge lighting)	FRLP (if not multiplexing)			
AlexaFluor 680	679	702	Red (M)	Cy5 edge (if imaging 2 D gel)		filt 705 (M)	Cy5 (if using edge lighting)				
AlexaFluor 700	696	719	Red (M)	Cy5 edge (if imaging 2 D gel)		filt 705 (M)	Cy5 (if using edge lighting)				
AlexaFluor 532	532	554	Green (M)	Cy3 edge (if imaging 2D gel)		filt 605M	Cy3 (if using edge lighting)				
AlexaFluor 488	490	525	Blue (M)	Tlum LW	Cy2 edge (if imaging 2D gel)	filt 525	SW06/032	Cy2 (if using edge lighting)			
AlexaFluor 555	555	580	Green (M)	Cy3 edge (if imaging 2D gel)		filt 605 (M)	Cy3 (if using edge lighting)				
AlexaFluor 594	590	617	Green (M)	Cy3 edge (if imaging 2D gel)		filt 605 (M)	Cy3 (if using edge lighting)				
AlexaFluor 647	650	665	Red (M)	Cy5 edge (if imaging 2 D gel)		filt 705 (M)	Cy5 (if using edge lighting)				
AlexaFluor 546	556	573	Green (M)	Cy3 edge (if imaging 2D gel)		filt 605 (M)	Cy3 (if using edge lighting)				
AlexaFluor 350	346	442	Tlum MW or LW	epi UV (MW/LW)		filt 440					AlexaFluor 350, AMCA
AlexaFluor 405	401	421	Tlum LW	epi LW		filt 440					AlexaFluor 405, Cascade Blue
AlexaFluor 568	578	603	Green (M)	Cy3 edge (if imaging 2D gel)		filt 605 (M)	Cy3 (if using edge lighting)				AlexaFluor 555/546, Cy3, TRITC
AlexaFluor 750	749	775	IR740 (M)			filt LY800					AlexaFluor 750, Cy5.5
Krypton	520	580	Green (M)	Cy3 edge (if imaging 2D gel)		filt 605 (M)	Cy3 (if using edge lighting)				
CY2	492	510	Cy2 edge	Blue (M)		Cy2	filt 525				
CY3	554	568	Cy3 edge	Green (M)		Cy3	Filt605 (M)				
CY5.5	678	694	Cy5 edge	Red (M)		Cy5	filt 705 (M)				
IR Dye800	778	794	IR740 (M)			filt LY800					
IR Dye 680	680	694	Red (M)			filt 705 (M)					
Tetramethylrhodamine (TRITC)	557	576	Green (M)	Cy3 edge (if imaging 2D gel)		filt 605 (M)	Cy3 (if using edge lighting)				
mGFP5	488	526	Blue (M)	Cy2 edge (if imaging 2D gel)	blue converter screen (use with UV filter)	filt 525	Cy2 (if using edge lighting)	SW06/032	UV06/032		
mNeon (green)	506	517	Blue (M)	blue converter screen (use with UV filter)	blue transilluminator ( use with UV filter)	filt 525	SW06/032	UV06/32			
RFP	560	595	Green (M)			filt 605 (M)	UV06/032				
DyLight 350	353	432	Tlum MW or LW	epi UV (MW/LW)		filt 440					
DyLight 405	400	420	Tlum LW	epi LW		filt 440					
DyLight 550	562	576	Green (M)	Cy3 edge (if imaging 2D gel)		filt 605 (M)	Cy3 (if using edge lighting)				
DyLight 594	593	618	Green (M)	Cy3 edge (if imaging 2D gel)		filt 605 (M)	Cy3 (if using edge lighting)				
DyLight 680	692	712	Red (M)	Cy5 edge (if imaging 2 D gel)		filt 705 (M)	Cy5 (if using edge lighting)				
DyLight 755	754	776	IR740 (M)			filt LY800					AlexaFluor 750
DyLight 800	777	794	IR740 (M)			filt LY800					IRDye800
DyLight 633	638	658	Red (M)	Cy5 edge (if imaging 2 D gel)		filt 705 (M)	Cy5 (if using edge lighting)				AlexaFluor 633
DyLight 650	652	672	Red (M)	Cy5 edge (if imaging 2 D gel)		filt 705 (M)	Cy5 (if using edge lighting)				AlexaFluor 647, Cy5
DyLight 488	493	518	Blue (M)	Cy2 edge (if imaging 2D gel)		filt 525	Cy2 (if using edge lighting)				AlexaFluor 488, Cy2, FITC, Fluorescein
Bodipy FL	503	512	Tlum MW	blue converter screen (use with UV filter)	blue transilluminator ( use with UV filter)	SW06/032	UV06/032				
Coumarin	387	470	Tlum MW or LW	epi UV (MW or LW)		filt 440					
Cy 5	649	666	Cy5 edge (if imaging 2 D gel)	Red (M)		Cy5	filt 705 (M)				
FITC	490	525	Blue (M)	Cy2 edge (if imaging 2D gel)		SW06/032	filt 525	Cy2 (if using edge lighting)			
Oregon Green	501	526	Tlum MW	blue converter screen (use with UV filter)	blue transilluminator ( use with UV filter)	SW06/032	UV06/032				
Pacific Blue	410	455	Tlum LW			filt 440					
Pacific Green	410	500	Tlum MW			SW06/032					
Pacific Orange	400	551	Tlum MW			SW06/032					
Texas Red	596	615	Green (M)	Cy3 edge (if imaging 2D gel)		FiltUV032/06	Filt605 (M)	Cy3			
DyLight 549	556	568	Green (M)	Cy3 edge (if imaging 2D gel)		filt605 (M)	Cy3 (if using edge lighting)				
DyLight 649	655	670	Red (M)	Cy5 edge (if imaging 2 D gel)		filt 705 (M)	Cy5 (if using edge lighting)				
SYPRO Orange	300, 470	570	Tlum MW	Blue (M)		UV06/032	SW06/032	Cy3	filt 565		
SYPRO Red	300, 544	619	Tlum MW	Green (M)		filt 605 (M)	UV06/032	filt 625	Cy3		
SYPRO Ruby	280, 480	618	Tlum MW	Blue (M)		filt 605 (M)	UV06/032	filt625	Cy3		
Methoxycoumarin	360	410	Tlum MW	epi UV (MW)		filt 440					
Brilliant Violet 421	407	421	Tlum LW	epi UV (LW)		filt 440					
HiLyte Fluor 405	404	428	Tlum LW	epi UV (LW)		filt 440					
Aminocoumarin	350	445	Tlum MW	epi UV (MW)		filt 440					
AMCyan	457	491	Tlum LW	epi UV (LW)		UV06/032					
Chromo 488	488	517	Tlum MW	epi UV (MW)	blue (M)	UV06/032	Filt525				
Chromo 505	505	526	Tlum MW	Blue (M)		UV06/032	filt 525				
HiLyte Fluor 488	501	527	Blue (M)			filt 525					
Alexa Fluor 430	434	541	Tlum LW	Blue (M)		UV06/032	filt 525				
HiLyte Fluor 555	550	566	Green (M)	Cy3 edge (if imaging 2D gel)		filt 605 (M)	Cy3 (if using edge lighting)				
Phycocerythrin (PE)	496, 566	576	Green (M)			filt 605 (M)					
CY3.5	576	589	Green (M)	Cy3 edge (if using edge lighting)		filt 605 (M)	Cy3 (if using edge lighting)				
Red 613 (PE-Texas red)	480, 565	613	Green (M)			filt 605 (M)					
HiLyte 594	593	616	Green (M)	Cy3 edge (if using edge lighting)		filt 605 (M)	Cy3				
Alexa Fluor 610	612	628	Red (M)	Cy5 edge		filt705 (M)	Cy5				
Chromo 494	494	628	Tlum MW	Green (M)		UV06/032	filt 605 (M)				
AlexaFluor 633	632	647	Red (M)	Cy5 edge (if using edge lighting)		filt 705 (M)	Cy5 (if using edge lighting)				

Fluorescent Dyes	Peak Excitation (nm)	Peak Emission (nm)		Lighting (1st choice)	Lighting (2nd choice)	Lighting (3rd choice)		Filter (1st choice)	Filter (2nd choice)	Filter (3rd choice)	Filter (4th choice)	Filter (5th choice)	Spectrally Similar Dyes
SureLight APC	652	657		Red (M)	Cy5 edge (if using edge lighting)			filt705 (M)	Cy5 (if using edge lighting)				
Chromoem 642	642	660		Red (M)	Cy5 edge (if using edge lighting)			filt 705 (M)	Cy5 (if using edge lighting)				
SureLight P3	614	662		Red (M)	Cy5 edge (if using edge lighting)			filt 705 (M)	Cy5 (if using edge lighting)				
PE-Cy5	565	666		Red (M)	Cy5 edge (if using edge lighting)			filt 705 (M)	Cy5 (if using edge lighting)				
PE-AlexaFluor 647	567	669		Green (M)	Red (M)			filt605 (M)	filt 705 (M)				
HiLyte Fluor 647	650	675		Red (M)	Cy5 edge (if using edge lighting)			filt705 (M)	Cy5 (if using edge lighting)				
IRDye700X	680	687		Red (M)				filt 705 (M)					
AlexaFluor 660	663	690		Red (M)	Cy5 (if using edge lighting)			filt 705 (M)	Cy5 (if using edge lighting)				
TruRed	490, 675	695		Red (M)				filt 705 (M)					
HiLyte Fluor 680	678	699		Red (M)				filt 705 (M)					
APC-Cy7	650	774		Red (M)	IR740 (M)			filt705 (M)	filt LY800				
Cy7	753	775		IR740 (M)				filt LY800					
HiLyte Fluor 750	753	778		IR740 (M)				filt LY800					
AlexaFluor 790	782	805		IR740 (M)				filt LY800					
IRDye800CW	778	794		IR740 (M)				filt LY800					
PE-Cy7	566	778		Green (M)	IR740 (M)			filt605 (M)	filt LY800				
<b>DNA stains</b>													
DAPI	350	470		Tlum MW	epi UV (MW/LW)			SW06/032					
SYTO 9	483	503		Blue converter screen	blue tlum			UV06/032					
SYTOX Green	504	523		Tlum MW	blue converter screen	blue tlum		SW06/032	UV06/032				
TO-PRO-3	642	661		Red (M)				filt 705 (M)					
Ethidium Bromide	302	595		Tlum MW	epi UV (MW)			UV06/032					
Hoechst 33258	352	461		Tlum MW	epi UV (MW/LW)			SW06/032					
Hoechst 33342	350	461		Tlum MW	epi UV (MW/LW)			SW06/033					
SYTOX-Blue	431	480		Tlum MW	blue converter screen	blue tlum		UV06/032					
YOYO-1	491	509		Blue converter screen	blue tlum			UV06/032					
TOTO-1, TO-PRO-1	509	533		Green (M)				filt605(M)	UV06/032				
SYTOX Orange	547	570		Green (M)	Cy3 edge (if using edge lighting)			filt605(M)	Cy3 (if using edge lighting)				
CyTRAK Orange	457, 488, 549	615		Blue (M)	blue converter screen	blue tlum		filt525	UV06/032				
Propidium iodide (PI)	305, 540	620		Tlum (MW)				UV06/032					
DRAQ5	646	681, 697		Red (M)	Cy5 edge (if using edge lighting)			filt 705 (M)	Cy5 (if using edge lighting)				
DRAQ7	599, 644	678, 697		Green (M)	Red (M)	Cy5 edge (if using edge lighting)		filt605(M)	filt 705 (M)	Cy5 (if using edge lighting)			
Acridine Orange	503	530/640		tlum (MW)	Green (M)			SW06/032	filt605(M)	UV06/032			
Thiazole Orange	510	530		Green (M)				filt605(M)	UV06/032				
<b>Safe DNA Dyes</b>													
SYBR Gold	300-495	537		Tlum MW	blue converter screen (Use with UV filter)	Blue transilluminator (use with UV filter)		SW06/032	UV06/032				
SYBR Green	290, 380, 497	520		Tlum MW	blue converter screen (Use with UV filter)	Blue transilluminator (use with UV filter)		SW06/032	UV06/032				
SYBR Safe	280, 502	530		Tlum MW	blue converter screen (Use with UV filter)	Blue transilluminator (use with UV filter)		SW06/032	UV06/032				
SYTO 11	508	527		Tlum MW	Green (M)			UV06/032	filt605(M)				
SYTO 12	499	522		blue (M)	blue converter screen (Use with UV filter)	blue transilluminator (use with UV filter)		filt525	UV06/032				
SYTO 13	488	509		Tlum MW	blue (M)	blue converter screen (use with UV filter)		UV06/032	filt525				
SYTO 16	488	518		blue (M)	blue converter screen (Use with UV filter)	blue tlum							
SYTO 21	494	517		Tlum MW	blue (M)	blue converter screen (use with UV filter)		SW06/032	filt525	UV06/032			
Midori Green	270, 290, 490	530		Tlum MW	blue converter screen (Use with UV filter)	Blue transilluminator (use with UV filter)		SW06/032	UV06/032				
GelRed	300, 500	600		Tlum MW	blue converter screen (Use with UV filter)	Blue transilluminator (use with UV filter)		SW06/032	UV06/032				
GelGreen	300, 500	550		Tlum MW	blue converter screen (Use with UV filter)	Blue transilluminator (use with UV filter)		SW06/032	UV06/032				
<b>Fluorescent protein labels</b>													
Allophycocyanin (APC)	650	660		Green (M)	Red (M)			filt605 (M)	filt 705 (M)				
R-Phycoerythrin	565	578		Tlum (LW)	Green (M)			UV06/032	filt605 (M)				
<b>Qdot probes</b>													
Pro-Q Diamond	UV	580		Tlum MW	Green (M)			UV06/032	filt605 (M)				
Pro-Q-Emerald 300	UV	550		Tlum MW				UV06/032					
Qdot 605	UV	605		Tlum MW/LW				filt 605		Cy3	UV06/032		
Qdot 655	UV	655		Tlum MW/LW				filt 655					
Qdot 525	UV	525		Tlum MW/LW				filt 525					
Qdot 565	UV	565		Tlum MW/LW				filt 565					
Qdot 705	UV	705		Tlum MW/LW				filt 705					
Qdot 800	UV	800		Tlum MW/LW				filt 800					

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<b>Expressed fluorescent protein</b>													
Cyan Fluorescent Protein (CFP)	435	485		Blue (M)	blue converter screen (use with UV filter)	blue transilluminator (use with UV filter)		SW06/032	filt 525	UV06/032			
Green Fluorescent Protein (GFP)	488	510		epi UV (LW)	Blue (M)			SW032/06	filt 525				
Red Fluorescent Protein (RFP)	555	584		Green (M)				filt 605 (M)	UV06/032				
GFP (Y66H mutation)	360	442		Tlum LW	epi UV (LW)			SW06/032					
GFP (Y66F mutation)	360	508		Tlum MW/LW	epi UV (MW/LW)			SW06/032					
GFP (Y66W mutation)	436	485		Blue (M)				SW06/032	filt 525				
GFP (S65A mutation)	471	504		Blue (M)				SW06/032	filt 525				
GFP (S65C mutation)	479	507		Blue (M)				SW06/032	filt 525				
GFP (S65L mutation)	484	510		Blue (M)				SW06/032	filt 525				
GFP (S65T mutation)	488	511		Blue (M)				SW06/032	filt 525				
EYFP	514	527		Green (M)	Cy3 edge (if using edge lighting)			filt 605 (M)					
Turbo YFP	525	538		Green (M)	Cy3 edge (if using edge lighting)	blue (M)		filt605 (M)		SW06/032	filt 525		
Blue Fluorescent Protein	400	455		Tlum MW	epi UV (MW)			SW06/032	UV06/032				