

Fluorophore - Reactive group selection chart

Fluorophore:	Reactive group:		NHS esters Primary amine (peptides, proteins, amino-labeled DNA)	Azides Ethyne group (click chemistry)	Alkynes Azide (click chemistry)	Maleimides Sulfhydryl group (peptides, proteins)	Hydrazides Carbonyl group (aldehydes, ketones)	Carboxylic acids Various (Steglich esterification)	Amines Electrophilic reagents (like activated esters)	Tetrazine Strained dienophile (trans-cyclooctene, cyclopropene)	Phosphoramidite DNA (oligo synthesis)	Cycloalkyne Azide (copper free Click chemistry)
	Target:											
	Abs. max. (nm)	Em. max. (nm)										
Pyrene	320 376	380	•63520	•2530 •3530 •1530	•1580	•3580	•3570	63590			•1460	
Phenylethynyl-pyrene (PEP)	362 384	389		•4530								
Perylene	410 434	436 465		•5530	•5580							
Coumarin 343	437	477	•2620	•2630 •1630				•2690				
BDP FL	503	509	•1420	•1430	•1480	•1480	•1470	•1490	•14C0	•14E0		•14F0
AF488	495	519	•1820	•1830								
Fluorescein (FAM)	494	520	•5120	•4130 •5130	•5180 •4180	•4180	•4170 •5170		•41C0 •51C0	•51E0 •41E0	•5160	•51F0
AF430	430	542	•0820	•0830	•0880	•0880		•0890		•08E0		
R6G	519	546		•4430	•5280						•5260	
BDP R6G	527	547	•4420	1476•	•4480	•4480	•4470	•4490	•44C0	•44E0		•44F0
JOE	533	554		•1130	•2180						•2160 •1160	
sulfo-Cyanine3	548	563	•1320	•1330	•1380	•1380		•1390	•13C0	•13E0		•13F0
TAMRA (TMR)	556	563	•7120	•8130 •7130	•8180 •7180	•8180 •7180	•8170		•71C0		2497•	
BDP 558/568	561	569	•7420	•7430	•7480		•7470	•7490	•74C0			
Cyanine3	555	570	•B041 •1020	•1030	•1080	•1080	•1070	•1090	•10C0	•10E0		•10F0
BDP TMR	542	574	•2420	•2430	•2480	•2480		•2490	•24C0			
BDP 564/570	565	574	•H420					•H490				
ROX (Rhodamine X, Rhodamine 101)	570	591	•1220 •2220	•1230	•1280	•1280						•12F0
BDP 581/591	585	594	•6420	•6430	•6480	•6480	•6470	•6490	•64C0	•64E0		•64F0
AF568	572	598	•4820	•5820	•4880			•5890				
sulfo-Cyanine3.5	576	603	•2320	•2330	•2380			•2390				
Cyanine3.5	591	604	•2020	•2030				•2090				
BDP TR	589	616	•3420 •D420	•3430	•3480	•3480	•3470	•3490	•34C0	•34E0		
BDP 630/650	628	642	•5420	•5430		•5480	•5470	•5490	•54C0	•54E0		
Cyanine5	646	662	•C041 •3020	•0	•3080	•3080	•3070	•3090	•30C0	•30E0	1740•	•30F0
sulfo-Cyanine5	646	662	•3320 •33D0	•3330	•3380	•3380		•3390	•33C0	•33E0		•33F0
BDP 650/665	646	662	•E420	•8430	•8480	•8480						
sulfo-Cyanine5.5	675	694	•7320	•7330	•7380	•7380		•7390	•73C0			•73F0
Cyanine5.5	684	710	•7020	•4030	•7080	•7080	•7070	•7090	•70C0	•70E0	2680•	•70F0
sulfo-Cyanine7	750	773	•5320 •53D0	•5330	•5380	•5380		•5390 1497•	•53C0	•53E0		
Cyanine7	750	773	•5020	•5030	•5080	•5080	•5070	1512• •5090	•50C0	•50E0		•50F0
sulfo-Cyanine7.5	778	797	•6320	•6330	•6380	•6380		•6390				