

Comprehensive fluorophore list

Comprehensive fluorophore list (includes absorption and emission peak values - from Zeiss)

Fluorophore	Absorption	Emission	Other info
1,5 IAEDANS	336	490	.
1,8-ANS	372	480	.
4-Methylumbelliferone	385	502	.
5-carboxy-2,7-dichlorofluorescein	504	529	.
5-Carboxyfluorescein (5-FAM)	492	518	.
5-Carboxynaphthofluorescein (pH 10)	512/598	563/668	Ratio Dye, pH
5-Carboxytetramethylrhodamine (5-TAMRA)	542	568	.
5-FAM (5-Carboxyfluorescein)	492	518	.
5-HAT (Hydroxy Tryptamine)	370-415	520-540	.
5-Hydroxy Tryptamine (HAT)	370-415	520-540	.
5-ROX (carboxy-X-rhodamine)	578	604	.
	567	591	.
5-TAMRA (5-Carboxytetramethylrhodamine)	548	552	.
	542	568	.
6-Carboxyrhodamine 6G	518	543	.
6-CR 6G	518	543	.
6-JOE	520	548	.
7-Amino-4-methylcoumarin	351	430	.
7-Aminoactinomycin D (7-AAD)	546	647	.
7-Hydroxy-4-methylcoumarin	360	449, 455	.
9-Amino-6-chloro-2-methoxyacridine	412, 430	471, 474	.
ABQ	344	445	.
Acid Fuchsin	540	630	.
ACMA (9-Amino-6-chloro-2-methoxyacridine)	412, 430	471, 474	.
Acridine Orange + DNA	502	526	.
Acridine Orange + RNA	460	650	.
Acridine Orange, both DNA & RNA	440-480	520-650	.
Acridine Red	455-600	560-680	.
Acridine Yellow	470	550	.
Acriflavin	436	520	.
Acriflavin Feulgen SITSA	355-425	460	.
Aequorin (Photoprotein)		466	Photoprotein
AFPs - AutoFluorescent Protein - (Quantum Biotechnologies) see sgGFP, sgBFP			
Alexa Fluor 350™	346	442	.
	342	441	.
Alexa Fluor 430™	431	540	.
Alexa Fluor 488™	495, 492	519, 520	.
Alexa Fluor 532™	531, 532	553, 554	.
Alexa Fluor 546™	556, 557	572, 573	.
Alexa Fluor 568™	577, 578	603	.
Alexa Fluor 594™	590, 594	617, 618	.
Alexa Fluor 633™	632	650	.
Alexa Fluor 647™	647	666	.
Alexa Fluor 660™	668	698	.
Alexa Fluor 680™	679	702	.
Alizarin Complexon	530-560, 580	580, 624-645	.
Alizarin Red	530-560	580	.
Allophycocyanin (APC)	630, 645	655, 660	.
AMC, AMCA-S	345	445	.
AMCA (Aminomethylcoumarin)	345	425	.
	347	444	.
AMCA-X	353	442	.
Aminoactinomycin D	555	655	.
Aminocoumarin	346	442	.
	350	445	.
Aminomethylcoumarin (AMCA)	345	425	.
	347	444	.
Anilin Blue		600	.
Anthrocyyl stearate	360-381	446	.
APC (Allophycocyanin)	630, 645	655, 660	.
APC-Cy7	625-650	755	.
APTRA-BTC = Ratio Dye, Zn2+	466/380	520/530	Ratio Dye, Zn2+

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APTS	424	505	
Astrazon Brilliant Red 4G	500	585	
Astrazon Orange R	470	540	
Astrazon Red 6B	520	595	
Astrazon Yellow 7 GLL	450	480	
Atabrine	436	490	
ATTO-TAG™ CBQCA	465	560	
ATTO-TAG™ FQ	486	591	
Auramine	460	550	
Aurophosphine G	450	580	
Aurophosphine	450-490	515	
BAO 9 (Bisaminophenylloxadiazole)	365	395	
BCECF (high pH)	492, 503	520, 528	
BCECF (low pH)	482	520	
Berberine Sulphate	430	550	
Beta Lactamase	409	447, 520	
BFP blue shifted GFP (Y66H)	381, 382, 383	445, 447, 448	blue shifted GFP (Y66H)
Blue Fluorescent Protein			Blue Fluorescent Protein
BFP/GFP FRET			
Bimane	398	490	
Bisbenzamide	360	461	
Bisbenzimidazole (Hoechst)	360	461	
bis-BTC = Ratio Dye, Zn2+	455/405	529/505	Ratio Dye, Zn2+
Blancophor FFG	390	470	
Blancophor SV	370	435	
BOBO™ -1	462	481	
BOBO™ -3	570	602	
Bodipy 492/515	490	515	
Bodipy 493/503	533	549	
Bodipy 500/510	509	515	
Bodipy 505/515	502	510	
Bodipy 530/550	528	547	
Bodipy 542/563	543	563	
Bodipy 558/568	558	569	
Bodipy 564/570	564	570	
Bodipy 576/589	579	590	
Bodipy 581/591	584	592	
Bodipy 630/650-X	625	642	
Bodipy 650/665-X	647	665	
Bodipy 665/676	605	676	
Bodipy FI	504, 505	511, 513	
Bodipy FL ATP	505	514	
Bodipy FI-Ceramide	505	511	
Bodipy R6G SE	528	547	
Bodipy TMR	542	574	
Bodipy TMR-X conjugate	544	573	
Bodipy TMR-X, SE	544	570	
Bodipy TR	589	617	
Bodipy TR ATP	591	620	
Bodipy TR-X SE	588	616	
BO-PRO™ -1	462	481	
BO-PRO™ -3	544	570	
Brilliant Sulphoflavin FF	430	520	
BTC - Ratio Dye Ca2+	464/401	533/529	Ratio Dye Ca2+
BTC-5N - Ratio Dye, Zn2+	459/417	517/532	Ratio Dye, Zn2+
Calcein	494	517	
Calcein Blue	373	440	
Calcium Crimson™	588, 589	611, 615	
Calcium Green	501, 506	531	
Calcium Green-1 Ca2+ Dye	506	531	Ca2+ Dye
Calcium Green-2 Ca2+	506/503	536	Ca2+
Calcium Green-5N Ca2+	506	532	Ca2+
Calcium Green-C18 Ca2+	509	530	Ca2+
Calcium Orange	549	575	
		576	
Calcofluor White	385, 395, 405	437, 440, 445	
Carboxy-X-rhodamine (5-ROX)	576	601	

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Cascade Blue™	377	420	
	398	423	
	399		
Cascade Yellow	399	550	
	400	552	
Catecholamine	410	470	
CCF2 (GeneBlazer)			
CFDA	494	520	
CFP - Cyan Fluorescent Protein	430, 433, 436, (453)	474, 475, 476, (501)	Cyan Fluorescent Protein
CFP/YFP FRET			
Chlorophyll	480	650	
Chromomycin A	436-460	470	
Chromomycin A	445	575	
CL-NERF (Ratio Dye, pH)	504/514	540	Ratio Dye, pH
CMFDA	494	520	
Coelenterazine Ca ²⁺ Dye, bioluminescence	(429)	465	Ca ²⁺ Dye, bioluminescence, native molecule
Coelenterazine cp (Ca ²⁺ Dye,)	(430)	442	Ca ²⁺ Dye, bioluminescence
Coelenterazine f	(437)	473	Ca ²⁺ Dye, bioluminescence
Coelenterazine fcp		452	Ca ²⁺ Dye, bioluminescence
Coelenterazine h	(437)	464	Ca ²⁺ Dye, bioluminescence
Coelenterazine hcp	(433)	444	Ca ²⁺ Dye, bioluminescence
Coelenterazine ip		441	Ca ²⁺ Dye, bioluminescence
Coelenterazine n	(431)	467	Ca ²⁺ Dye, bioluminescence
Coelenterazine O	460	575	
Coumarin Phalloidin	387	470	
C-phycoerythrin			
CPM Methylcoumarin	384	469	Methylcoumarin
CTC	400-450	602	
CTC Formazan			
Cy2™	489	506	
Cy3.1 8	554	568	
Cy3.5™	581	598	
Cy3™	514	566	
	552	570	
	554		
Cy5.1 8	649	666	
Cy5.5™	675	695	
Cy5™	649	666	
		670	
Cy7™	710, 743	767, 805	
Cyan GFP	433 (453)	475 (501)	
cyclic AMP Fluorosensor (FICRHR)	500	517	
CyQuant Cell Proliferation Assay	480	520	Cell Proliferation Assay
Dabcyl	453		
Dansyl	340	578	
Dansyl Amine	337	517	
Dansyl Cadaverine	335	518	
Dansyl Chloride	372	518	
Dansyl DHPE	336	517	
Dansyl fluoride	356	none	
DAPI	359	461	
Dapoxyl	403	580	
Dapoxyl 2	374	574	
Dapoxyl 3	373	574	
DCFDA	504	529	
DCFH (Dichlorodihydrofluorescein Diacetate)	505	535	
DDAO	463	607	
DHR (Dihydrohodamine 123)	505	534	
Di-4-ANEPPS	496	705	
Di-8-ANEPPS (non-ratio)	488	605	
	498	713	

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DiA (4-Di-16-ASP)	456	591	
Dichlorodihydrofluorescein Diacetate (DCFH)	505	535	
DiD - Lipophilic Tracer	644	665	Lipophilic Tracer
DiD (DiIC18(5))	644	665	
DIDS	341	415	
Dihydrohodamine 123 (DHR)	505	535	
Dil (DiIC18(3))	549, 551	565	
Dinitrophenol	349		
DiO (DiOC18(3))	484, 487	501, 502	
DiR	748	780	Lipophilic Tracer
DiR (DiIC18(7))	750	779	
DM-NERF (high pH)	497/510	540	Ratio Dye, pH
DNP	349		
Dopamine	340	490-520	
DsRed	558	583	Red fluorescent protein
DTAF	494	520	
DY-630-NHS	621	660	Hemicyane label for proteins and DNA
DY-635-NHS	634	664	Hemicyane label for proteins and DNA
EBFP	383	447	Enhanced Blue Fluorescent Protein
ECFP	436	474	Enhanced Cyan Fluorescent Protein
EGFP	488, 498	507, 516	Enhanced Green Fluorescent Protein
ELF 97	345	530	
Eosin	524	545	
Erythrosin	529, 532	554, 555	
Erythrosin ITC	529	555	
Ethidium Bromide	510, 523	595, 605	
Ethidium homodimer -1 (EthD-1)	528	617	
Euchrysin	430	540	
EukoLight			
Europium (III) chloride			
EYFP	513, 520	527, 532	Enhanced Yellow Fluorescent Protein
Fast Blue	360	440	
FDA	494	520	
Feulgen (Pararosaniline)	570	625	
FIF (Formaldehyd Induced Fluorescence)	405	433	
FITC	490, 494	520, 525	
FITC Antibody	493	517	
Flazo Orange	375-530	612	
Fluo-3	480 – 506, 506	520, 527	
Fluo-4	494	516	
Fluorescein (FITC)	490, 494	520, 525	
Fluorescein Diacetate	494	520	
Fluoro-Emerald	495	524	
Fluoro-Gold (Hydroxystilbamidine)	361	536	
Fluor-Ruby	555	582	
FluorX	494	520	
FM 1-43™	479	598	
FM 4-46	515	640	
Fura Red™ (high pH)	572	657	
Fura Red™/Fluo-3			
Fura-2, high calcium	335	505	Excitation ratio dye
Fura-2, low calcium	363	512	Excitation ratio dye
Fura-2/BCECF			
Genacryl Brilliant Red B	520	590	
Genacryl Brilliant Yellow 10GF	430	485	
Genacryl Pink 3G	470	583	
Genacryl Yellow 5GF	430	475	
GeneBlazer (CCF2)			
GFP (S65T)	498	516	
GFP red shifted (rsGFP)	498	516	
GFP wild type, non-UV excitation (wtGFP)	475	509	
GFP wild type, UV excitation (wtGFP)	395	509	

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GFPuv	385	508	
Gloxaclic Acid	405	460	
Granular Blue	355	425	
Haematoporphyrin	530-560	580	
Hoechst 33258	345	487	
Hoechst 33342	347	483	
Hoechst 34580	392	440	
HPTS	355	465	
Hydroxycoumarin	325-360	386-455	
Hydroxystilbamide (FluoroGold)	361	536	
Hydroxytryptamine	400	530	
Indo-1, high calcium	330	401	Emission ratio dye
Indo-1, low calcium	346	475	Emission ratio dye
Indodicarbocyanine (DiD)	644	665	
Indotricarbocyanine (DiR)	748	780	
Intrawhite Cf	360	430	
JC-1	514	529	
JO-JO-1	530	545	
JO-PRO-1	532	544	
LaserPro	795	812	
Laurodan	355	460	
LDS 751 (DNA)	543	712	
LDS 751 (RNA)	590	607	
Leucophor PAF	370	430	
Leucophor SF	380	465	
Leucophor WS	395	465	
Lissamine Rhodamine	572, 577	591, 592	
Lissamine Rhodamine B	577	592	
LIVE/DEAD Kit Animal Cells	494	517	for more details refer to
Calcein/Ethidium homodimer	528	617	www.probes.com
LOLO-1	566	580	
LO-PRO-1	568	581	
Lucifer Yellow	425, 428	528, 536, 540	
Lyso Tracker Blue	373	422	
Lyso Tracker Blue-White	466	536	
Lyso Tracker Green	504, 534	511, 551	
Lyso Tracker Red	490	516	
Lyso Tracker Yellow	551	576	
LysoSensor Blue	374	424	
LysoSensor Green	442	505	
LysoSensor Yellow/Blue	384	540	
Mag Green	507	531	
Magdala Red (Phloxin B)	524	600	
Mag-Fura Red	483/427	659/631	Ratio Dye, Mg2+
Mag-Fura-2	369/329	508	Ratio Dye Ca2+
	369/330	511/491	Ratio Dye Mg2+
Mag-Fura-5	369/330	505/500	Ratio Dye, Ca2+
	369/332	505/482	Ratio Dye, Mg2+
Mag-Indo-1	349/328	480/390	Ratio Dye, Ca2+
	349/330	480/417	Ratio Dye, Mg2+
Magnesium Green	506, 507	531	
Magnesium Orange	550	575	
Malachite Green	628		
Marina Blue	362	459	
Maxilon Brilliant Flavin 10 GFF	450	495	
Maxilon Brilliant Flavin 8 GFF	460	495	
Merocyanin	555	578	
Methoxycoumarin	360	410	
Mitotracker Green FM	490	516	
Mitotracker Orange	551	576	
Mitotracker Red	578	599	
Mitramycin	450	470	
Monobromobimane	398	490	
Monobromobimane (mBBr-GSH)	398	500	
Monochlorobimane	380	461	
MPS (Methyl Green Pyronine Stilbene)	364	395	
NBD	466	539	
NBD Amine	450	530	
Nile Red	515-555, 559	590, 640	
Nitrobenzoxadidole	465	510-650	
Noradrenaline	340	490-520	
Nuclear Fast Red	289-530	580	
Nuclear Yellow	365	495	
Nylosan Brilliant lavin E8G	460	510	

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Oregon Green	503	522	.
Oregon Green 488-X	494	517	.
Oregon Green™	503	522	.
Oregon Green™ 488	490, 493	514, 520	.
Oregon Green™ 500	497	517	.
Oregon Green™ 514	506	526	.
Pacific Blue	405	455	.
Pararosaniline (Feulgen)	570	625	.
PBFI	340/380	420	Excitation ratio dye
PE-Cy5	488	670	.
PE-Cy7	488	755, 767	.
PerCP	488	675	.
PerCP-Cy5.5	488	710	.
PE-TexasRed [Red 613]	488	613	.
Phloxin B (Magdala Red)	524	600	.
Phorwite AR	360	430	.
Phorwite BKL	370	430	.
Phorwite Rev	380	430	.
Phorwite RPA	375	430	.
Phosphine 3R	465	565	.
PhotoResist	365	610	.
Phycoerythrin B [PE]	546-565	575	.
Phycoerythrin R [PE]	565	578	.
PKH26 (Sigma)	551	567	.
PKH67	496	520	Chroma
PMIA	341	376	.
Pontochrome Blue Black	535-553	605	.
POPO-1	433	457	.
POPO-3	533	574	.
PO-PRO-1	435	455	.
PO-PRO-3	539	567	.
Primuline	410	550	.
Procion Yellow	470	600	.
Propidium Iodid (PI)	(305), 536, 538	617	.
PyMPO	412, 415	561, 564, 570	.
Pyrene	360	387	.
Pyronine	410	540	.
Pyronine B	540-590	560-650	.
Pyrozal Brilliant Flavin 7GF	365	495	.
QSY 7	560		.
Quinacrine Mustard	440	510	.
Red 613 [PE-TexasRed]	488	613	.
Resorufin	571	584, 585	.
RH 414	532	716	.
Rhod-2	552	576	.
Rhodamine	550	573	.
Rhodamine 110	496, 497	520	.
Rhodamine 123	507	529	.
Rhodamine 5 GLD	470	565	.
Rhodamine 6G	525	555	.
Rhodamine B	540	625	.
Rhodamine B 200	523-557	595	.
Rhodamine B extra	550	605	.
Rhodamine BB	540	580	.
Rhodamine BG	540	572	.
Rhodamine Green	502	527	.
Rhodamine Phalloidine	558, 542	575, 565	.
Rhodamine Phalloidine	542	565	.
Rhodamine Red	570	590	.
Rhodamine WT	530	555	.
Rose Bengal	525, 540	550-600	.
R-phycoerythrin			.
R-phycoerythrin (PE)	565	578	.
rsGFP	473	509	red shifted GFP (S65T)
S65A	471	504	.
S65C	479	507	.
S65L	484	510	.
S65T	488	511	.
Sapphire GFP	395	511	.
SBFI	340/380	420	Excitation ratio dye
Serotonin	365	520-540	.
Sevron Brilliant Red 2B	520	595	.
Sevron Brilliant Red 4G	500	583	.
Sevron Brilliant Red B	530	590	.

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Sevron Orange	440	530	.
Sevron Yellow L	430	490	.
sgBFP™	387	450	.
sgBFP™ (super glow BFP)	387	450	Quantum's SuperGlo™GFP AFPs
sgGFP™	474	488	.
sgGFP™ (super glow GFP)	474	509	Quantum's SuperGlo™GFP AFPs
SITS	336	436	Ion Channels
SITS (Primuline)	395-425	450	.
SITS (Stilbene Isothiosulphonic Acid)	365	460	.
SNAFL calcein	506/535	535/620	Ratio Dye, pH
SNAFL-1	508/540	543/623	Ratio Dye, pH
SNAFL-2	514/543	546/630	Ratio Dye, pH
SNARF calcein	552/574	590/629	Ratio Dye, pH
SNARF1	576/548	635/587	Excitation and emission ratio dye
Sodium Green	506, 507	532	Na+, K+
SpectrumAqua	433, 53	480/55	Vysis
SpectrumGreen	497/30, 509/31	538/44, 524/56	Vysis
SpectrumOrange	559/38, 560	588/48	Vysis
Spectrum Red	587, 587/35	612, 612/51	.
SPQ (6-methoxy-N-(3-sulfopropyl) quinolinium)	344	443	.
Stilbene	335	440	.
Sulphorhodamine B can C	520	595	.
Sulphorhodamine G Extra	470	570	.
SYTO 11	508, 510	527, 530	Dye for DNA, RNA
SYTO 12	499, 500	522, 519	Dye for DNA, RNA
SYTO 13	488, 491	509, 514	Dye for DNA, RNA
SYTO 14	517, 521	549, 547	Dye for DNA, RNA
SYTO 15	516, 518	546, 555	Dye for DNA, RNA
SYTO 16	488, 494	518, 525	Dye for DNA, RNA
SYTO 17	621	634	Dye for DNA
SYTO 18	490, 493	507, 527	Dye for DNA, RNA
SYTO 20	512	530	Dye for DNA
SYTO 21	494	517	Dye for DNA
SYTO 22	515	535	Dye for DNA
SYTO 23	499	520	Dye for DNA
SYTO 24	490	515	Dye for DNA
SYTO 25	521	556	Dye for DNA
SYTO 40	420	441	Dye for DNA
SYTO 41	430	454	Dye for DNA
SYTO 42	433	460	Dye for DNA
SYTO 43	436	467	Dye for DNA
SYTO 44	446	471	Dye for DNA
SYTO 45	452	484	Dye for DNA
SYTO 59	622	645	Dye for DNA
SYTO 60	652	678	Dye for DNA
SYTO 61	628	645	Dye for DNA
SYTO 62	652	676	Dye for DNA
SYTO 63	657	673	Dye for DNA
SYTO 64	599	619	Dye for DNA
SYTO 80	531	545	Nucleic Acid Stain
SYTO 81	530	544	Nucleic Acid Stain
SYTO 82	541	560	Nucleic Acid Stain
SYTO 83	543	559	Nucleic Acid Stain
SYTO 84	567	582	Nucleic Acid Stain
SYTO 85	567	583	Nucleic Acid Stain
SYTOX Blue	445	470	Nucleic Acid Stain
SYTOX Green	504	523	Nucleic Acid Stain
SYTOX Orange	547	570	Nucleic Acid Stain
Tetracycline	390-425	525-560	.
Tetramethylrhodamine (TRITC)	555	576	.
Texas Red™	595	620	.
Texas Red-X™ conjugate	595	615	.
Thiadocarbocyanine (DiSC3)	651, 653	674, 675	.
Thiazine Red R	596	615	.
Thiazole Orange	510	530	.
Thioflavin 5	430	550	.
Thioflavin S	430	550	.
Thioflavin TCN	350	460	.
ThioLyte	370-385	477-488	.

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Thiozole Orange	453	480	.
Tinopol CBS (Calcofluor White)	390	430	.
TMR	550	573	.
TO-PRO-1	515	531	.
TO-PRO-3	644	657	.
TO-PRO-5	747	770	.
TOTO-1	514	531, 533	.
TOTO-3	642	660	.
TriColor (PE-Cy5)	(488) 650	667	.
TRITC	550	573	.
TetramethylRodamineIsoThioCyanate			.
True Blue	365	425	.
TruRed	490	695	.
Ultralite	656	678	.
Uranine B	420	520	.
Uvitex SFC	365	435	.
wt GFP	395 (475)	508	wild type GFP
WW 781	605	639	.
X-Rhodamine	580	605	.
XRITC	582	601	.
Xylene Orange	546	580	.
Y66F	360	508	.
Y66H	360	442	.
Y66W	436	485	.
Yellow GFP	513	527	Yellow shifted Green Fluorescent Protein
YFP	513, 520	527, 532	Yellow Fluorescent Protein
YO-PRO-1	491	506	.
YO-PRO-3	613	629	.
YOYO-1	491	508, 509	.
YOYO-3	612	631	.