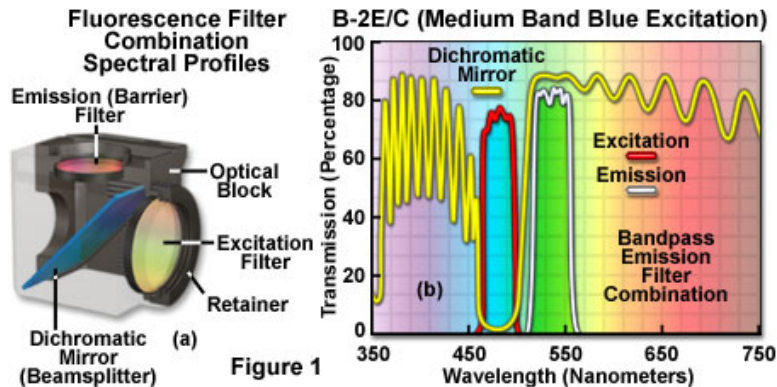


# Fluorochromes and Recommended Nikon Filter Cubes

NIKON INSTRUMENTS INC.

*The Eyes of Science.*



Fluorescence /flô rëss'ðns - Luminescence in which light of a visible color is emitted from certain substances, called phosphors, when irradiated by electromagnetic radiation, especially ultraviolet light. Unlike phosphorescence, the light is emitted only while the stimulation continues. In microscopy, this is used to locate fluorescently tagged material (protein, enzyme, gene) by illuminating the material with one wavelength of light in hopes that the fluorescence tag will appear by emitting this light at a different wavelength; i.e. FITC labeled materials in tissue when illuminated with blue light will emit with green light.\*

\*Credit: [www.microscopyu.com](http://www.microscopyu.com), image and definition

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## Fluorochromes and Recommended Nikon Filter Cubes

Revised 4/24/01

Fluorochrome	Excitation	Emission	Nikon Cube Suggestion
<b>A</b>			
ACMA	430	474	BV-2B
Acid Fuchsin(Pararosaniline)	540	630	TRITC (G-2E/C), G-2A, G-2B
Acridine Blue			UV-2A
Acridine Orange (+DNA)	502	526	FITC (B-2E/C), FITC HYQ, B-2A, B-2E
Acridine Orange (+RNA)	460	650	B-2A
Acridine Orange (DNA+RNA)	440-480	520-560	B-2A
Acridine Red	455-600	560-680	CY3 (G-2A)
Acridine Yellow	470	550	FITC (B-2E/C), FITC HYQ, B-2A, B-2E
Acriflavine-Feulgen	430	515	BV-2A
Acriflavine-Feulgen-SITSA (AFA)	355-425	460	V-2A
Acriflavine-SO <sub>2</sub> -PAS	436	520	BV-2A
Adrenaline			BV-2A
Alexa 350	346	442	DAPI (UV-2E/C)
Alexa 430	431	541	BV-2B
Alexa 488	491	515	FITC (B-2E/C), FITC HYQ, B-2A, B-2E
Alexa 532	531	554	TRITC (G-2E/C) G1B
Alexa 546	553	569	TRITC (G-2E/C), TRITC HYQ, CY3 (G-2A)
Alexa 568	573	596	TX RED (Y-2E/C), TX RED HYQ, CY3 (G-2A)
Alexa 594	594	610	G-2B, TX RED HYQ
Alizarin Complexon	530-560	580	G-1B, TRITC HYQ
Alizarin Red	530-560	580	CY3 (G-2A), G-1B, TRITC HYQ
Allphycocyanin (APC)	630	660	
AMC, AMCAS	345	445	DAPI (UV-2E/C), UV-2A
AMCA(7-Amino-4-methylcoumarin-3-acetic acid)	349	448	DAPI (UV-2E/C), UV-2A
AMCA-X	349	448	DAPI (UV-2E/C), UV-2A
7-AminoactinomycinD(7-AAD)	546	647	CY3 (G-2A), G-1A, TRITC (G-2E/C)
Aminocoumarin	350	445	DAPI (UV-2E/C), UV-2A, UV-2B
7-Amino-4-methylcoumarin	351	430	DAPI (UV-2E/C), UV-2A, UV-2B
6-Aminoquinoline	360	443	DAPI (UV-2E/C), UV-2B
16 Anthroyl oxyl palmitate	360	463	UV-2A
ANS (8-Anilino-1-naphthalene sulfonic acid Mg-salt)	385	485	UV-2A, V-2A, BV-2A
APC (Allophycocyanin)	650	660	
Astrazon brilliant red 4G	500	585	CY3 (G-2A)
Astrazon orange R	470	540	B-2A, FITC (B-2E/C)
Astrazon red 6B	520	595	CY3 (G-2A)
Astrazon yellow 7GLL	450	480	BV-2A
Atabrine (or Atebrine)	436	490	BV-2A
Atto-Tag CBQ	466	554	B-2A
Atto-Tag FQ	486	591	B-2A
Auramine O	460	550	B-2A, B-2E
Aurophosphine G	450	580	B-2A

<b>B</b>			
BAO	365	395	UV-1A
BCECF	505	535	B-2A
BCECF (ACID)	457/482	520	
BCECF (BASE)	508	531	

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BCECF-AM	490	526	FITC (B-2E/C), FITC HYQ, B-2A
Benzoxanthen yellow			
Berberine sulphate	430	550	B-2E, B-2A, B-3A
Beta Lactamase	409	447-520	V-1A
Bisbenzamide	360	461	DAPI (UV-2E/C), UV-1A
Blancophor BA			B-3A
Blancophor FFG solution	390	470	V-2A
Blancophor SV	370	435	DAPI (UV-2E/C), UV-2A
Blue FluoSpheres*	350	440	DAPI (UV-2E/C), UV-1A, UV-2A
Blue FluoSpheres * (Slightly shorter-wavelength)	365	415	UV-1A, UV-2A
Blue GFP (BFP)	381	445	Blue BFP
BOBOTIM1	462	481	BV-2B, BV-2A
BOBO Tn1-3	570	602	TX RED (Y-2E/C), CY3 (G-2A)
BODIPY * ceramide	505	511	GFP-LP (Endow GFP-LP), GFP-BP (Endow GFP-BP, Piston BP)
BODIPY * FL	503	512	GFP-LP (Endow GFP-LP), GFP-BP (Endow GFP-BP, Piston BP)
BODIPY * TMR	542	574	CY3 (G-2A)
BODIPY * TR	589	617	TX RED (Y-2E/C)
BODIPY * 530/550	533	550	
BODIPY * 558/568	558	568	CY3 HYQ, CY3 (G-2A)
BODIPY * 564/570	564	570	CY3 HYQ, CY3 (G-2A)
BODIPY * 581/591	582	590	TX RED (Y-2E/C)
BO-PRO TM-1	462	481	BV-2A
BO-PRO TM-3	575	599	TX RED (Y-2E/C)
Brilliant flavine 7 GFF	430	520	BV-2A
Brilliant sulphoflavine FF	417	520	BV-2A

<b>C</b>			
Calcein	496	517	FITC (B-2E/C), B-2A, FITC HYQ, EGFP (Endow GFP-BP, Piston GFP-BP)
Calcein-AM	490	515	FITC (B-2E/C), B-2A, FITC HYQ, EGFP (Endow GFP-BP, Piston GFP-BP)
Calcein blue	375	435	UV-2A
Calcium Crimson TM	588	611	TX RED HYQ
Calcium Green TM-1	506	534	FITC HYQ, B-2A
Calcium Green TM-2	506	531	FITC HYQ, B-2A
Calcium Green TM-5N	506	531	FITC HYQ, B-2A
Calcium GreenTM dextran (low)	506	531	FITC HYQ, B-2A
Calcium Green TM dextran (high)	509	532	FITC HYQ, B-2A
Calcium Orange TM	554	575	CY3 (G-2A)
Calcorfluor RW solution	370	440	UV-2A
Calcorfluor white	440	520-550	B-3A
Calcorfluor white ABT solution	380	475	V-2A
Calcorfluor white standard	365	435	UV-2A
Carbocyanine LDL	520	560	CY3 (G-2A)
Carboxy-SNAFL* -1 (acid)	479/508	543	B-2A
Carboxy-SNAFL* -1 (base)	537	624	G-2B
Carboxy-SNARF* -1 (acid)	518/548	587	CY3 (G-2A)
Carboxy-SNARF* -1 (base)	579	635	TX RED (Y-2E/C)
Carboxyfluorescein	492	516	FITC (B-2E/C), FITC HYQ, B-2A

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Carboxyfluoresceinsuccinimidyl ester	496	520	FITC (B-2E/C), FITC HYQ, B-2A
Carboxy-X-rhodamine	576	601	CY3 (G-2A)
Cascade Blue*	375/398	424	UV-2A
Catecholamine	410	470	BV-2A
CFDA(Carboxyfluorescein	495	520	FITC (B-2E/C), FITC HYQ, B-2A
CFSE			FITC (B-2E/C), FITC HYQ, B-2A
Chinacrine	450-490	515	FITC (B-2E/C), FITC HYQ, B-2A
Chloropophyll	425/660	680	B-2A
Chromomycin A3	436-460	470	BV-2A
CL-NERS (base)	514	540	B-2E, YELLOW GFP BPHYQ
Coryphosphine O	460	575	FITC (B-2E/C), FITC HYQ, B-2A
Coumarin Phalloidin	387	470	V-2A
C-phycoyanin	620	648	CY5 HYQ
CPM (Coumarin maleimide)	385	471	V-2A
CRF 110	490	525	FITC (B-2E/C), FITC HYQ, B-2A
CRF 492	492	521	FITC (B-2E/C), FITC HYQ, B-2A
Crimson FluoSpheres *	625	645	
CR6G	525	555	
CTC formazan	450	630	B-3A
CTMR	546	576	CY3 (G-2A)
Cy2TM	489	506	B-2A, Endow GFP BP
Cy3TM	550	570	CY3 (G-2A)
Cy3.5 TM	581	596	TX RED (Y-2E/C)
Cy5 HYQ TM	649	670	CY5 HYQ
Cy5 HYQ.5 TM	675	694	
Cy7TM	743	767	
Cyan GFP (CFP)	433(453)	475(501)	Cyan GFP
Cyanine	552	579	CY3 (G-2A), G-1B
Cychrome	568	672	TX RED (Y-2E/C)

<b>D</b>			
DANS	340	525	UV-2A
(Dimethylaminonaphthalene-5-DANSA	340-380	430	DAPI (UV-2E/C), UV-2A
Dansyl amide			
Dansyl amine	340	525	UV-2B
Dansyl chloride	335	515	UV-2B
Dansyl hydrazine	336	534	UV-2B
DAPI (4',6-diamino-2-phenylindole dihydrochloride)	359	461	UV-2A, DAPI (UV-2E/C),
DASPMI	460	590	B-2A
Dark Red FluoSpheres *	660	680	CY5 HYQ
DCFH	505	535	FITC (B-2E/C), FITC HYQ
DiA	491	613	B-2A
Di-4-Anepps	496	705	B-2A
Di-8-Anepps	498	713	B-2A
Diaminophenyl oxadiazol			UV-2A
Diethylzmino-5-S02	310-370	520	UV-2A
DiBAC4(5)	540(590)	580(610)	CY3 (G-2A), G-2B, TRITC (G-2E/C)
DiD (DiIC18(5))	644	665	
DIDS	342	418	UV-2A

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Dihydrorhodamine 123	<300	none	
(rhodamine 123 after oxidation)	505	534	B-2A, FITC (B-2E/C), FITC HYQ
Dil (DiIC18(3))	549	565	CY3 (G-2A)
(Dioctadecyl Tetramethylindocarbocyanine Perchlorate)			
DiO (DiOC18(3))	484	501	B-2A, ENDOW GFP, FITC HYQ
DiOC2(5)	579	603	CY3 (G-2A), TX RED (Y-2E/C)
DiOC5(3)	484	509	B-2A, ENDOW GFP, FITC HYQ
DiOC6(3)	484	501	B-2A, ENDOW GFP, FITC HYQ
DiOC7(3)	482	504	B-2A, ENDOW GFP, FITC HYQ
DiSC2(5)	649	671	CY5 HYQ
Diphenyl brilliant flavine 7GFF	430	520	BV-2B
DIPI	364	455	UV-2A
DM-NERF(base)	510	536	
Dopamine	340	490-520	UV-2A
DPH (1,6-diphenyl-1,3,5-	350	452	UV-2A
DIQ	555	681	CY3 (G-2A)
DsRed	558	583	TRITC HYQ, TRITC (G-2E/C)

<b>E</b>			
ECD		613	CY3 (G-2A)
EGFP	488	507	ENDOW GFP LP, GFP BP
ELF * -97 (Enzyme-Labeled Fluorescein)	345	530	UV-2A
Eosin cadaverine	515	540	CY3 (G-2A), B-2A
Eosin-5-isothiocyanate(EITC)	521	544	Yellow GFP BP HYQ
Erythrosin-5-isothiocyanate	528	553	B-2A
Ethidium bromide (EB)	518	605	CY3 (G-2A)
Ethidium homodimers			G-2B
Ethidium homodimer-1 (EthD-1)	528	617	CY3 (G-2A), TRITC (G-2E/C), TRITC HYQ
Ethidium homodimer-2 (EthD-2)	535	624	CY3 (G-2A), TRITC (G-2E/C), TRITC HYQ
Eucrysin	430	540	BV-2A
Evans blue	460	515	B-2A

<b>F</b>			
Fast blue	360	440	UV-2A, DAPI (UV-2E/C)
Far Red FluoSpheres	690	720	
Fast red			CY3 (G-2A)
FDA(Fluorescein diacetate)			B-2A
Feulgen			
FIF	405	435	V-IA
Filpin	350	510	UV-2A
FIM-K+SALT	480	520	
FITC (Fluorescein isothiocyanate)	495	519	B-2A, FITC (B-2E/C), FITC HYQ
Flazo orange	375-530	612	G-2B, B-3A
Fluo-3	506	526	B-2A, FITC HYQ
Fluorescamine	390	475	UV-2A
Fluorescein	490	514	FITC (B-2E/C), FITC HYQ, B-2A, B-IA
FluorXTM	494	519	FITC (B-2E/C), FITC HYQ, B-2A, B-IA
FluoroGold	368	565	UV-2A
Floram	383	478	UV-2A

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FM1-43	502	625	B-2A
FMI-84	504	626	B-2A
FMI-64	543	700	CY3 (G-2A)
Fungigual			
Fura-2	340 / 380	510	
Fura-2 (low Ca <sup>2+</sup> )	362	512	
Fura-2 (high Ca <sup>2+</sup> )	335	505	
Fura Red TM	472	646	B-2A

<b>G</b>			
Genacryl brilliant red B	520	590	CY3 (G-2A)
Genacryl brilliant yellow IOGF	430	485	BV-2A
Genacryl pink 3G	470	583	B-2A
Ganacryl yellow 5GF	430	475	BV-2A
GFP blue shifted (Y66H)	382	448	UV-2A
GFP blue BFP	390	460	Blue BFP
GFP Cyan	436	480	Cyan GFP
GFP mutant W	458	480	BV-2A
GFP red shifted mutants (S65T)	489	511	Endow or Piston GFP LP, GFP BP
GFP red shifted mutants (EGFP)	488	507	Endow or Piston GFP LP, GFP BP
GFP red shifted mutants (RSGFP)	490	505	Endow or Piston GFP LP, GFP BP
GFP red shifted mutants (T203Y)	513	527	Yellow GFP BP HYQ
GFP wild type (Aequora)	396/475	508/503	V-2A, Endow GFP LP or GFP BP
GFP yellow (10c/Topaz)	490-510	520-550	Yellow GFP BP HYQ
Gloxalic acide	425	460	V-2A
Granular blue	355	425	UV-2A

<b>H</b>			
HPTS	355	465	DAPI (UV-2E/C), UV-2A
Haematoporphyrin	530-560	580	CY3 (G-2A)
Henatoporphyrine	365	640	UV-2A
Hexidium iodide	518	600	CY3 (G-2A)
HNPP (HNP/TR)	550	562	B-3A
Hoechst 33258(bis-benziarnide)	346	460	UV-2A
Hoechst 33342	350	460	UV-2A
7-hidroxy-4-methylcoumarine	360	455	UV-2A
Hydroxytryptamine	400	530	V-1A, V-2A

<b>I</b>			
1,5 iaedans	336	482	UV-2A
ImaGene Green TM	490	514	B-2A, Endow GFP
Indo-1	355	408/485	
Infrared FluoSpheres *	715	775	
Indo-1 (low Ca <sup>2+</sup> )	346	475	
Indo-1 (high Ca <sup>2+</sup> )	330	408	
Indodicarbocyanine	644	665	CY5 HYQ
Indotricarbocyanine	739	765	
Intrawhite cf liquid	360	430	UV-2A

<b>J</b>			
JC-1	514	529	B-2A, Yellow GFP BP HYQ
JOE	520	548	

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Fluorochrome	Excitation	Emission	Nikon Cube Suggestion
<b>L</b>			
Leucophor PAF	370	430	UV-2A, UV-2B, DAPI (UV-2E/C),
Leucophor SF	380	465	V-2A
Leucophor WS	395	465	V-2A
Lissamine rhodamine B	570	590	CY3 (G-2A),G-2B
Lissamine rhodamine B SC	556	576	CY3 (G-2A)
LIVE/DEAD * BacLight™ Bacterial Viability Kit (SYTO-9/Propidium iodide)	485/535	520/617	B-2A
LIVE/DEAD * BacLight™ Bacterial Gram Stain Kit (SYTO-9/Hexidium iodide)	485/518	520/600	B-2A
LIVE/DEAD * Cell-Mediate Cytotoxicity Kit (DiOC18 (3)/Propidium iodide)	484/535	501/617	B-2A
LIVE/DEAD * Viability/Cytotoxicity Kit (Calcein AM/Ethidium homodimer-	490/528	515 /617	B-2A
LPS 751	488	670	B-2A
Lucifer yellow	428	531	B-3A, BV-2B
Lucifer yellow CH	430	540	B-3A, BV-2B
Lucifer yellow VS	430	535	B-3A, BV-2B
Lyso Sensor™ Blue	374	425	UV-2A
Lyso Sensor™ Green	442	505	B-3A, BV-2B
Lyso Sensor™ Yellow/Blue	329	440	UV-2A
Lyso Tracker™ Green	504	551	B-2A, FITC HYQ
Lyso Tracker™ Red	577	592	CY3 (G-2A), TX RED (Y-2E/C), TX RED HYQ
Lyso Tracker™ Yellow	534	551	
<b>M</b>			
Magdala red	524	600	CY3 (G-2A)
mag-fura-2	330	491	UV-2A
mag-indo-1 (low)	349	476	UV-2A
mag-indo-1 (high)	330	417	UV-2A
Magnesium Green™	506	532	B-2A, FITC HYQ
Magnesium Orange™	550	575	CY3 (G-2A)
Maxilon brilliant flavin 10 GFF	450	495	B-2A, B-3A
Maxilon brilliant flavin 8 GFF	460	495	B-2A
Mepracrine			
Mercury orange	488	630	B-2A
Merocyanin 540	555	578	CY3 (G-2A)
4-Methylumbelliferone	360	449	DAPI (UV-2E/C), UV-2A
4-Methylutnbelliferyl-d-glucuronide	317	375	UV-2A
Mithramycin	395	535	BV-2A
Mito Tracker™ Green	490	516	B-2A, FITC (B-2E/C), FITC HYQ
Mito Tracker™ Orange	551	576	CY3 (G-2A)
Mito Tracker™ Red	578	599	TX RED (Y-2E/C)
MPS	364	395	UV-IA
<b>N</b>			
NBD (amine)	460	534	FITC (B-2E/C), FITC HYQ, B-2A

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NBD ceramide	464	532	FITC (B-2E/C), FITC HYQ, B-2A
Nile Blue			
Nile Red	551	636	CY3 (G-2A)
Nile Red FluoSpheres *	535	575	G-2B, CY3 (G-2A)
Nolyl-Acridineorange	495	522	FITC (B-2E/C), FITC HYQ, B-2A
Noradrenaline	340	490-520	UV-2A
Nuclear fast red	280-530	580	CY3 (G-2A), B-2A
Nuclear yellow	365	495	UV-2A
Nylosan brilliant flavin E8G	460	510	FITC (B-2E/C), FITC HYQ, B-2A

### O

Olivomycin			BV-1A
Orange FluoSpheres *	530	560	CY3 (G-2A)
Oregon Green TM 488	496	524	FITC (B-2E/C), FITC HYQ, B-2A
Oregon Green TM 500	503	522	B-2A, FITC HYQ
Oregon Green TM514	511	530	B-2A, Yellow GFP BP HYQ
Oxytetracycline			BV-2A

### P

Pacific Blue	405	455	
Paprosaniline (feulgen)	570	625	CY3 (G-2A), TX RED (Y-2E/C)
PBFI (low)	346	551	UV-2A
PBFI (high)	334	525	UV-2A
Phorwhite as solution	360	430	UV-2A
Phorwhite BKL	370	430	UV-2A
Phorwhite REV	380	430	UV-2A
Phorwhite RPA	375	430	UV-2A
Phosphine 3R	465	565	B-2A
Phronine Y G2A	410	540	BV-2A
Phtaldial dehyde	350	420-500	UV-2A
Phycocyanine	633	650	
B-phycoerythrin	546/565	575	CY3 (G-2A)
R-phycoerythrin	480/546/565	578	CY3 (G-2A)
PKH26	551	567	G-1B, TRITC (G-2E/C), TRITC HYQ
Pontachrome blue black	535-553	605	CY3 (G-2A)
POPO TM-1	434	456	BV-2A
POPO TM-3	534	570	CY3 (G-2A)
PO-PROTM-1	434	456	BV-2A, CYAN GFP
PO-PROTM-3	534	570	CY3 (G-2A)
Priceton red	488	585	B-2A
Primuline O	410	550	BV-2A, BV-2B
Procicon yellow			BV-1A
Procion yellow	470	600	B-2A
Propidium iodide (PI)	536	617	CY3 (G-2A), TRITC HYQ
Pympo	415	570	BV-2A
Pyronine	490	578	B-2A
Pyronine B	540-590	560-650	CY3 (G-2A)
Pyronine Y	555	580	CY3 (G-2A)
Pyrozal brilliant flavin 7GF	365	495	UV-2A

### Q

Quantum red			
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Revised 4/24/01

Fluorochrome	Excitation	Emission	Nikon Cube Suggestion
Quin-2	340/360	492	
Quin-2 (low Ca <sup>2+</sup> )	352	492	
Quin-2 (high Ca <sup>2+</sup> )	332	492	
Quinacrine Mustard 423	423	503	BV-2B, BV-2A

<b>R</b>			
RDI		576	B-2A
Red FluoSpheres *	580	605	TEXAS RED (Y-2E/C)
Red orange FluoSpheres	565	580	CY3 (G-2A)
Resorufine, sodium salt 570	570	585	CY3 (G-2A)
Reverine			BV-2A
RH 160	581	705	CY3 (G-2A)
RH 414	531	714	CY3 (G-2A)
RH 421	515	704	CY3 (G-2A)
RH 461	531	713	CY3 (G-2A)
RH 795	530	712	CY3 (G-2A)
Rhod-2	556	576	CY3 (G-2A)
Rhodamine 110	496	520	B-2A, FITC HYQ
Rhodamine 123	505	534	B-2A, FITC HYQ
Rhodamine 5 GLD	470	565	B-2A, B-2E
Rhodarnine 6G, chloride	528	550	CY3 (G-2A)
Rhodamine B, hexyl ester, chloride	555	579	CY3 (G-2A)
Rhodamine B extra	550	605	CY3 (G-2A), TRITC (G-2E/C), TRITC HYQ
Rhodamine B isothiocyanate	554	577	CY3 (G-2A), TRITC (G-2E/C), TRITC HYQ
Rhodamine B200	523-557	595	CY3 (G-2A), TRITC (G-2E/C), TRITC HYQ
Rhodamine BB	540	580	CY3 (G-2A)
Rhodamine BG	540	572	CY3 (G-2A)
Rhodamine GreenTM	502	527	B-2A, FITC HYQ, Yellow GFP BP HYQ
Rhodamine phalloidin	550	575	CY3 (G-2A)
Rhodamine RedTM	570	590	CY3 (G-2A), TRITC (G-2E/C), TRITC HYQ
Rhodamine WT	530	555	CY3 (G-2A)
Rhodol Green TM	494	521	B-2A, FITC HYQ, FITC (B-2E/C)
RIM-1	561	580	CY3 (G-2A), TRITC (G-2E/C), TRITC HYQ
Rose bengal	544	550-600	CY3 (G-2A)
R-phycocyanin	618	642	CY5 HYQ

<b>S</b>			
Sapphire GFP	395	551	
SBF1 (low)	346	551	UV-2A
SBF1 (high)	334	525	UV-2A
Serotonin	365	520-540	UV-2A
Sevexon brilliant red 2B	520	595	CY3 (G-2A), TRITC (G-2E/C), TRITC HYQ
Severon brilliant red 4G	500	583	CY3 (G-2A)
Severon brilliant red B	530	590	CY3 (G-2A), TRITC (G-2E/C), TRITC HYQ
Severon orange	440	530	B-3A, B-2A
Severon yellow L	430	490	BV-2A
SITS	336	438	UV-2A
SITS (primuline)	395-425	450	V-2A
SITSA			UV-2A
SNAFL* -1 (base)	576	635	CY3 (G-2A)
SNAFL* -2	525	546	

## Fluorochromes and Recommended Nikon Filter Cubes

Revised 4/24/01

Fluorochrome	Excitation	Emission	Nikon Cube Suggestion
SNARF* -1	575	635	
Sodium Green TM	507	532	B-2A, FITC HYQ, Yellow GFP BP HYQ
Spectrum Aqua TM	433	480	BV-2A, Cyan GFP
Spectrum Green TM	509	538	B-2A, Yellow GFP BP HYQ
Spectrum Orange TM	559	588	CY3 (G-2A)
Spectrum Red TM	587	612	TX RED (Y-2E/C)
SPO	344	443	UV-2A
Sulphaflavine			UV-2A
Sulfo rhodamine B	554	583	CY3 (G-2A)
Sulpho rhodamine G extra	470	570	B-2A
SYTO * 11	508	527	B-2A, FITC HYQ Yellow GFP BP HYQ
SYTO * 12	500	522	B-2A, FITC HYQ
SYTO * 13	488	509	B-2A, Endow GFP HYQ, FITC HYQ
SYTO * 14	517	549	B-2A
SYTO * 15	516	546	B-2A
SYTO * 16	488	518	B-2A, FITC HYQ
SYTO * 20	512	530	B-2A
SYTO * 21	494	517	B-2A, FITC HYQ
SYTO * 22	515	535	B-2A
SYTO * 23	499	520	B-2A, FITC (B-2E/C), FITC HYQ
SYTO * 24	490	515	B-2A, FITC (B-2E/C), FITC HYQ
SYTO * 25	512	556	B-2A
SYTO * 17	621	634	
SYTOX *	504	523	B-2A, FITC HYQ

<b>T</b>			
Tetracycline	390	560	BV-2A, UV-2A
Texas Red *	577	620	TX RED (Y-2E/C), TEXAS RED HYQ
Texas Red * -X	595	615	TX RED (Y-2E/C), TEXAS RED HYQ
Thiazine red R	510	580	CY3 (G-2A)
Thiadiazocyanine	651	671	CY5 HYQ
Thizole	488	533	FITC (B-2E/C), FITC HYQ, B-2A
Thioflavine 5	430	550	BV-2A
Thioflavine S	430	550	BV-2A
Thioflavine TCN	350	460	UV-2A
Thiolyte	370-385	477-484	V-2A
Tinopol CBS	390	430	V-2A
TMR (Tetramethylrhodamine)	555	580	TRITC (G-2E/C), TRITC HYQ, CY3 (G-2A)
TO-PROTM-1	514	533	B-2A, Yellow GFP BP HYQ
TO-PROTM-3	642	660	CY5 HYQ
TO-PROTM-5	747	770	
TOTO*-1	514	533	B-2A, Yellow GFP BP HYQ
TOTO*-3	642	660	CY5 HYQ
TRITC (G-2E/C) (Tetramethylrhodamine-5(and-6)- isothiocyanate)	547	572	CY3 (G-2A), TRITC (G-2E/C), TRITC HYQ
True Blue	369	404	UV-2A

<b>U</b>			
Uravine B	420	520	B-3A
Uvintex SFC	365	435	UV-2A

## Fluorochromes and Recommended Nikon Filter Cubes

Revised 4/24/01

Fluorochrome	Excitation	Emission	Nikon Cube Suggestion
<b>V</b>			
Vitablue	590	660	TX RED (Y-2E/C), TEXAS RED HYQ

<b>W</b>			
WT GFP	395 (475)	508	Endow or Piston GFP BP
WW781	605	639	CY5 HYQ

<b>X</b>			
XRITC (X-rhodamine-5-(and-6)-isothiocyanate)	580	605	CY3 (G-2A), TX RED (Y-2E/C), TEXAS RED HYQ
Xylene orange	546	580	G-1A, CY3 (G-2A)

<b>Y</b>			
Yellow-green FluoSphers *	505	515	B-2A, FITC HYQ, Yellow GFP BP HYQ
YO-PROTM-1	491	509	B-2A, Endow BP, FITC HYQ, Endow GFP BP
YO-PROTM-3	612	631	
YOYO*-1	491	509	B-2A, FITC HYQ, Endow GFP BP

Note : This listing shows only possible filter combinations for each fluorochrome.  
Depending on specimen and experimental conditions, it is recommended to try several filter combinations.

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