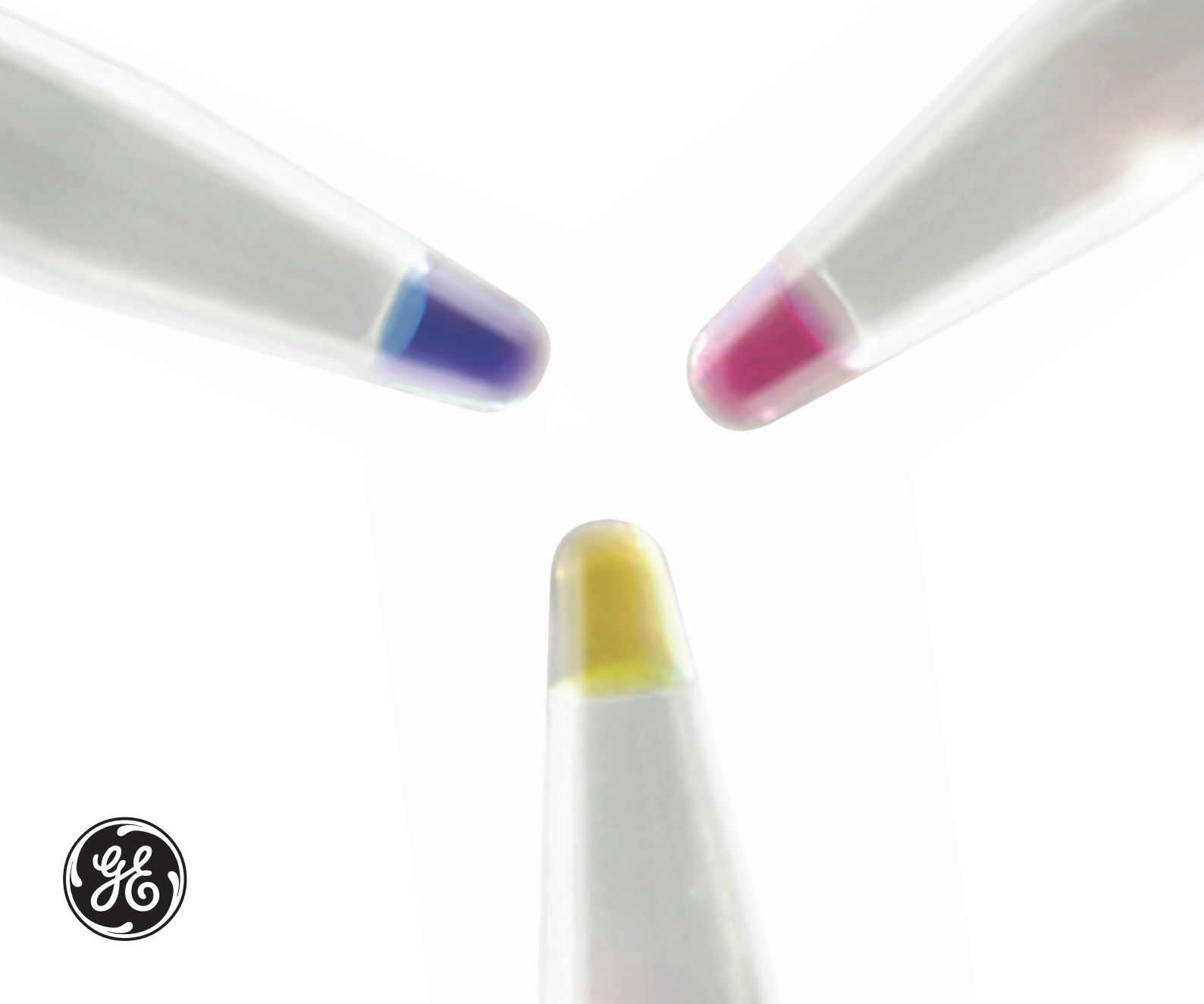


GE Healthcare  
Life Sciences

# Amersham™ CyDye™ fluors

Selection Guide

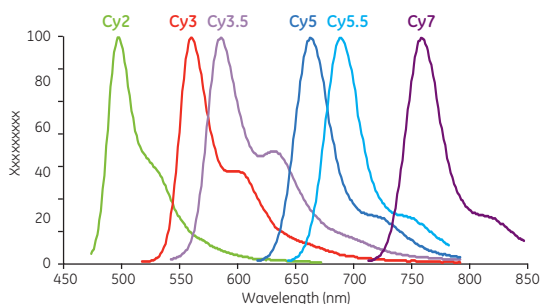


# Welcome to Amersham CyDye fluors

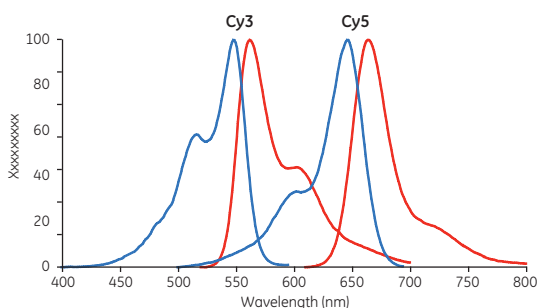
Amersham CyDye fluors are versatile fluorophores designed for a broad range of applications. CyDye fluors combine exceptional photostability with bright and intense signals, resulting in high sensitivity and a highly reproducible performance at a biologically suitable pH range of 3 to 10. The use of multicolor CyDye fluors enables multiplexing without crosstalk. In addition, the CyDye fluors readily dissolve in aqueous buffers, which eliminates the need of organic solvents. Finally, the high purity and thorough QC testing of Amersham CyDye fluors generate high levels of chromophore and reactive dye content.

Narrow excitation and emission bands result in discrete signals from each fluor, which together with minimal cross-talk contributes to high accuracy.

CyDye emission profiles

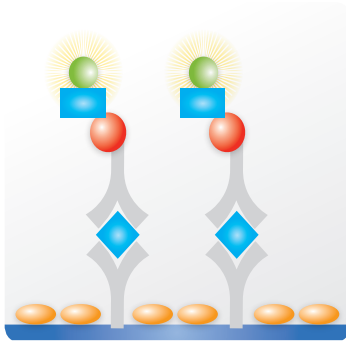


Excitation and emission profiles of Cy3 and Cy5



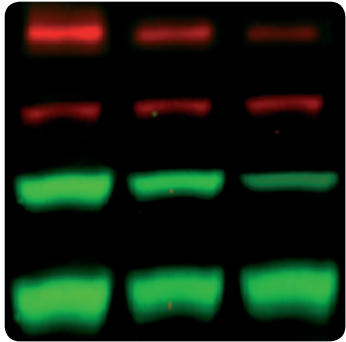
Spectral properties of CyDye fluors

	Color	Excitation max	Emission max
Cy2	Green	489	506
Cy3	Red	550	570
Cy3.5	Red	581	596
Cy5	Blue	649	670
Cy5.5	Blue	675	694
Cy7	Purple	743	767



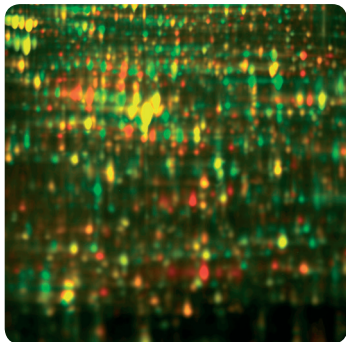
### Multi-purpose labeling

- Wide selection of CyDye fluors for protein labeling for use in e.g., ELISA & immunoprecipitation
- Labeling strategy based on protein characteristics
  - Antibodies
  - Glycoproteins and carbohydrates
  - Amine-rich proteins



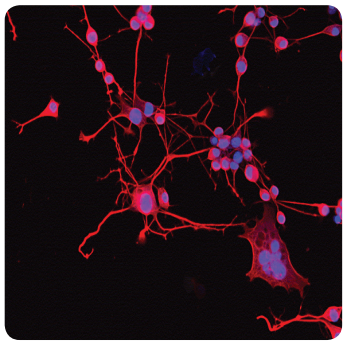
### Fluorescent Western blotting

- Amersham ECL Plex™ for multiplexed, quantitative Western blotting
- Normalization to housekeeping protein in expression analysis
- Analysis of post-translational modifications and isoforms



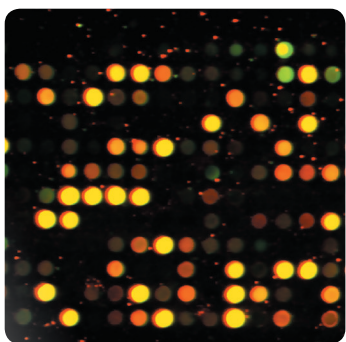
### 2-D DIGE

- Size and charge matched CyDye DIGE fluors enabling multiplexed quantitative 2D electrophoresis
- Labeling strategy based on sample availability
- Saturation dyes
  - For scarce sample material
- Minimal dyes
  - When sample material is not limiting



### Cell imaging

- CyDye labeled secondary antibodies for use in the IN Cell Analyzer Systems
  - Development of fixed cell assays for novel targets
  - Medium to high-throughput fluorescence imaging
  - Ready-to-use labeled antibodies enable multiplexed assays
- Streptavidin-conjugated CyDye fluors for use in
  - Flow-cytometry
  - In situ* hybridization



### DNA, RNA, and oligo labeling

- For multicolor analysis in microarrays, aCGH, FISH, whole chromosome painting, karyotyping, and gene mapping
- A broad range of labeled nucleotides and reactive dyes available
- A range of CyDye labeled amidites are available for incorporation in oligosynthesis
- Provides options for direct labeling or post-labeling applications
- CyScribe™ labeling kits offer ease of use
- Custom pack sizes available upon request

# CyDye fluor for a wide range of applications

## Multi-purpose protein labeling

	Quantity	Code no.	Cy2	Cy3	Cy3.5	Cy5	Cy5.5	Cy7
<b>5-packs</b>								
<b>Mono-Reactive CyDye packs</b>								
<i>Targeted and specific labeling of amine residues on antibodies, peptides, or oligonucleotides</i>								
Cy3 mono	5 × 1 mg	PA23001		•				
Cy3.5 mono	5 × 1 mg	PA23501			•			
Cy5 mono	5 × 1 mg	PA25001				•		
Cy5.5 mono	5 × 1 mg	PA25501					•	
<b>Bis-Reactive CyDye packs</b>								
<i>Suitable for general labeling of amine residues</i>								
Cy2 bis	5 × 1 mg	PA22000	•					
Cy3.5 bis	5 × 1 mg	PA23500			•			
Cy5 bis	5 × 1 mg	PA25000				•		
Cy5.5 bis	5 × 1 mg	PA25500					•	
<b>Mono-Reactive Maleimide CyDye packs</b>								
<i>A more selective method of antibody labeling that reduces the possibility of the label interfering with subsequent antibody-antigen reactions</i>								
Cy3 Maleimide mono-Reactive Dye Pack	5 × 1 mg	PA23031		•				
Cy5 Maleimide mono-Reactive Dye Pack	5 × 1 mg	PA25031				•		



	Quantity	Code no.	Cy2	Cy3	Cy3.5	Cy5	Cy5.5	Cy7
<b>Mono-Reactive NHS ester</b>								
<i>Targeted and specific labeling of amine residues on antibodies, peptides, or oligonucleotides</i>								
Cy3 mono NHS ester	150 µg	25900472		•				
	1 mg	PA13101		•				
	5 mg	PA13105		•				
	10 mg	PA13104		•				
	25 mg	PA13106		•				
	50 mg	PA13102		•				
Cy3.5 mono NHS ester	1 mg	PA13601			•			
	5 mg	PA13605			•			
	25 mg	PA13606			•			
Cy5 mono NHS ester	150 µg	25900472				•		
	1 mg	PA15101				•		
	5 mg	PA15100				•		
	10 mg	PA15104				•		
	25 mg	PA15106				•		
	50 mg	PA15102				•		
Cy5.5 mono NHS ester	1 mg	PA15601					•	
	5 mg	PA15605					•	
	10 mg	PA15604					•	
	25 mg	PA15606					•	
	50 mg	PA15602					•	
Cy7 mono NHS ester	1 mg	PA17101						•
	5 mg	PA17105						•
	10 mg	PA17104						•

### Bis-Reactive NHS ester

*Suitable for general labeling of amine residues*

Cy2 Bis NHS ester	5 mg	PA12000	•					
	10 mg	PA12004	•					
	50 mg	PA12002	•					
Cy3 Bis NHS ester	5 mg	PA13000		•				
	10 mg	PA13004		•				
	50 mg	PA13002		•				
Cy5 Bis NHS ester	5 mg	PA15000				•		
	10 mg	PA15004				•		
	50 mg	PA15002				•		
Cy5.5 Bis NHS ester	5 mg	PA15500					•	
	10 mg	PA15504					•	
	50 mg	PA15502					•	
Cy7 Bis NHS ester	5 mg	PA17000						•
	10 mg	PA17004						•
	50 mg	PA17002						•

	Quantity	Code no.	Cy2	Cy3	Cy3.5	Cy5	Cy5.5	Cy7
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### Mono-Reactive Maleimide

A more selective method of antibody labeling that reduces the possibility of the label interfering with subsequent antibody-antigen reactions

Cy3 mono maleimide	1 mg	PA13131		•				
	5 mg	PA13130		•				
Cy3.5 mono maleimide	1 mg	PA13631			•			
	5 mg	PA13630			•			
Cy5 mono maleimide	1 mg	PA15131				•		
	5 mg	PA15130				•		
	25 mg	PA15136				•		
Cy5.5 mono maleimide	1 mg	PA15631					•	
	5 mg	PA15630					•	
	25 mg	PA15636					•	

### Mono-Reactive Hydrazide

For the labeling of free carbonyl groups of glycoproteins and carbohydrates

Cy3 mono hydrazide	1 mg	PA13121		•				
	5 mg	PA13120		•				
Cy5 mono hydrazide	1 mg	PA15121				•		
	5 mg	PA15120				•		
Cy5.5 mono hydrazide	1 mg	PA15621					•	
	5 mg	PA15620					•	

### Select-a-dye

Enables a variety of labeling strategies using NHS ester, maleimide, or hydrazide to be investigated

Cy5 Select-a-Dye pack	3 × 0.5 mg	PA15123				•		
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### Antibody labeling kits

A convenient way to tag antibodies with CyDye fluorescent dyes. Antibody kits contain all reagents required for 2 × 1 mg reactions

Cy2 Ab Labeling Kit		PA32000	•					
Cy3 Ab Labeling Kit		PA33000		•				
Cy5 Ab Labeling Kit		PA35000				•		

### Monoclonal antibody labeling kits

Monoclonal antibody kits contain all reagents required for 2 × 0.1 mg reactions

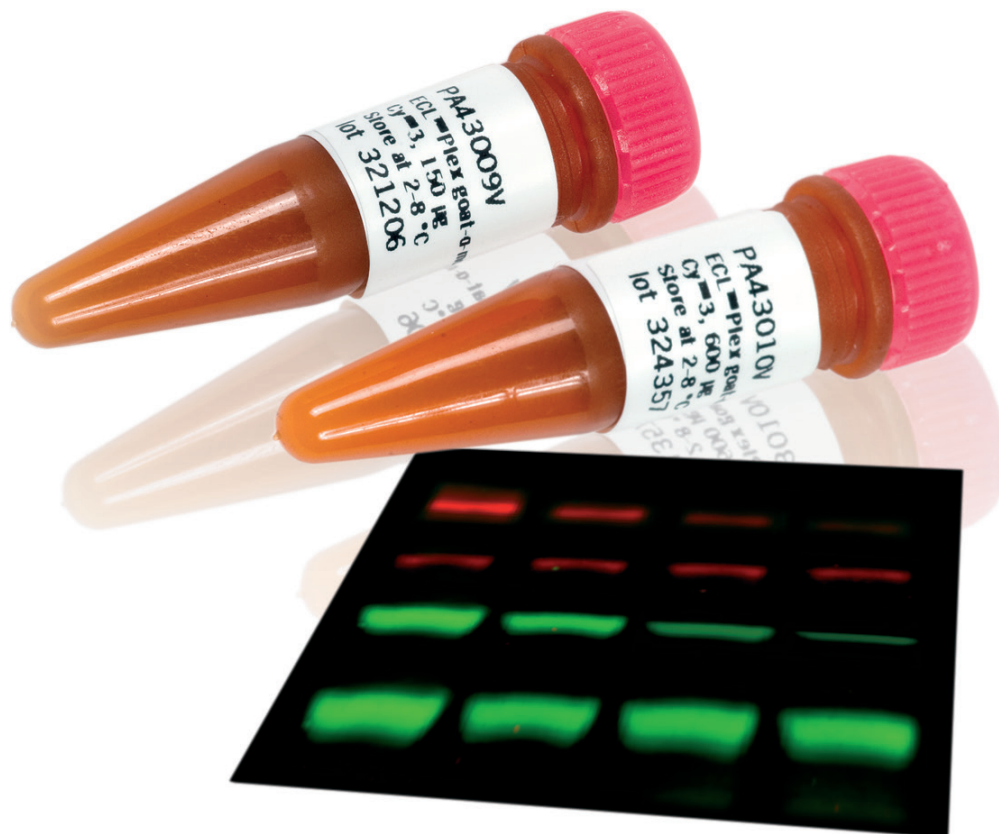
Cy2 mAb Labeling Kit		PA32001	•					
Cy5 mAb Labeling Kit		PA35001				•		





## Fluorescent Western Blotting

Product	Code no.	Quantity	Cy2	Cy3	Cy5
ECL Plex goat-@-mouse IgG-Cy5, sufficient for 1000 cm <sup>2</sup> membrane area	PA45009	150 µg			•
ECL Plex goat-@-rabbit IgG-Cy5, sufficient for 1000 cm <sup>2</sup> membrane area	PA45011	150 µg			•
ECL Plex goat-@-mouse IgG-Cy3, sufficient for 1000 cm <sup>2</sup> membrane area	PA43009	150 µg		•	
ECL Plex goat-@-rabbit IgG-Cy3, sufficient for 1000 cm <sup>2</sup> membrane area	28-9011-06	150 µg		•	



## 2-D DIGE

	Code no.	Quantity	Minimal dye	Scarce sample
CyDye DIGE Fluor, Cy2 minimal dye	25-8010-82	5 nmol	•	
CyDye DIGE Fluor, Cy3 minimal dye	25-8010-83	5 nmol	•	
CyDye DIGE Fluor, Cy5 minimal dye	25-8010-85	5 nmol	•	
CyDye DIGE Fluor, Cy2 minimal dye	25-8008-60	10 nmol	•	
CyDye DIGE Fluor, Cy3 minimal dye	25-8008-61	10 nmol	•	
CyDye DIGE Fluor, Cy5 minimal dye	25-8008-62	10 nmol	•	
CyDye DIGE Fluor, Cy2 minimal dye	RPK0272	25 nmol	•	
CyDye DIGE Fluor, Cy3 minimal dye	RPK0273	25 nmol	•	
CyDye DIGE Fluor, Cy5 minimal dye	RPK0275	25 nmol	•	
Minimal dye labeling kit	28-9345-30	2 nmol	•	
CyDye DIGE Fluor, minimal labeling kit	25-8010-65	5 nmol	•	
DIGE labeling kit for scarce samples	25-8009-83	1 kit		•
Scarce samples and preparative gel labeling	25-8009-84	1 kit		•
Preparative gel labeling for scarce samples, Cy3 saturation dye	28-9366-83	400 nmol		•



## Cell imaging

	Code no.	Cy2	Cy3	Cy3.5	Cy5	Cy5.5	Cy7
<b>Streptavidin-Fluor conjugates</b>							
<i>Streptavidin conjugated to a range of fluorescent dyes for use in situ hybridization and flow cytometry</i>							
Cy2-Streptavidin	PA42001	•					
Cy3-Streptavidin	PA43001		•				
Cy5-Streptavidin	PA45001				•		



## DNA and RNA labelling

	Quantity	Code no.	Product information
<b>CyDye Fluorescent Nucleotides</b>			
<i>CyDye labeled nucleotides are available in a range of bright, intense colors with narrow emission bands</i>			
Cy3-dCTP	25 nmol	PA53021	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH7.0
Cy3-dCTP	25 nmol	PA53031	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH 7.0
Cy5-dCTP	25 nmol	PA55021	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH 7.0
Cy5-dCTP	250 nmol	PA55031	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH 7.0
Cy3-dUTP	25 nmol	PA53022	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH 7.0
Cy3-dUTP	250 nmol	PA53032	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH 7.0
Cy5-dUTP	25 nmol	PA55022	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH 7.0
Cy5-dUTP	250 nmol	PA55032	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH 7.0
Cy3.5-dCTP	25 nmol	PA53521	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH 7.0
Cy5.5-dCTP	250 nmol	PA55521	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH 7.0
Cy3-CTP	100 nmol	25-8010-86	Supplied as a 5 mM solution
Cy5-CTP	100 nmol	25-8010-87	Supplied as a 5 mM solution
Cy3-UTP	100 nmol	PA53026	Supplied as a 5 mM solution
Cy5-UTP	100 nmol	PA55026	Supplied as a 5 mM solution
Value Pack dCTP	5 × 25 nmol Cy3 dCTP + 5 × 25 nmol Cy5 dCTP	PA55321	Bulk pack of labeled Cy3 and Cy5 labeled dCTP
Value Pack dUTP	5 × 25 nmol Cy3 dUTP + 5 × 25 nmol Cy5 dUTP	PA55322	Bulk pack of labeled Cy3 and Cy5 labeled dUTP
CyDye Post-Labeling Reactive Dye Pack	12 × 40 000 pmol Cy3 + 12 × 40 000 pmol Cy5	RPN5661	Cy3 and Cy5 reactive NHS esters
Cy3 Post-Labeling Reactive Dye Pack	12 × 40 000 pmol Cy3	25-8010-79	Cy3 NHS esters
Cy5 Post-Labeling Reactive Dye Pack	12 × 40 000 pmol Cy5	25-8010-80	Cy5 NHS esters

### Cy™ Amidites

*For CyDye incorporation at any position in an oligonucleotide during synthesis*

Cy3 Amidite	100 mg	28-9172-98	
Cy3 Amidite	1 g	28-9172-99	
Cy5 Amidite	100 mg	28-9042-49	
Cy5 Amidite	1 g	28-9021-58	
Cy5.5 Amidite	100 mg	28-9042-50	
Cy5.5 Amidite	1 g	28-9021-60	

*Custom pack sizes are available for all Cy dye products. Please enquire with your local GE Sales representative for additional information.*

# Systems for fluorescence imaging

	Cy2	Cy3	Cy5	Comments
<b>Systems for fluorescence imaging</b>				
ImageQuant LAS 500	•			Supports UV/ Blue fluorescence for Ethidium Bromide and SYBR™ Green
Amersham Imager 600 RGB	•	•	•	
Amersham Typhoon RGB	•	•	•	
Amersham Typhoon 5	•	•	•	Also supports NIR Long and NIR Short fluorescence

For more information or to place your order, please visit [www.gelifesciences.com](http://www.gelifesciences.com) or contact your local GE distributor.



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GE Healthcare UK Limited  
Amersham Place  
Little Chalfont  
Buckinghamshire, HP7 9NA  
UK

GE Healthcare Europe, GmbH  
Munzinger Strasse 5  
D-79111 Freiburg  
Germany

GE Healthcare Bio-Sciences Corp.  
800 Centennial Avenue, P.O. Box 1327  
Piscataway, NJ 08855-1327  
USA

GE Healthcare Bio-Sciences KK  
Sonken Bldg., 3-25-1, Hyakunincho  
Shinjuku-ku, Tokyo 169-0073  
Japan

For contact information for your local office, please visit, [www.gelifesciences.com/contact](http://www.gelifesciences.com/contact)

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GE Healthcare Bio-Sciences AB  
Björkgatan 30  
751 84 Uppsala  
Sweden

