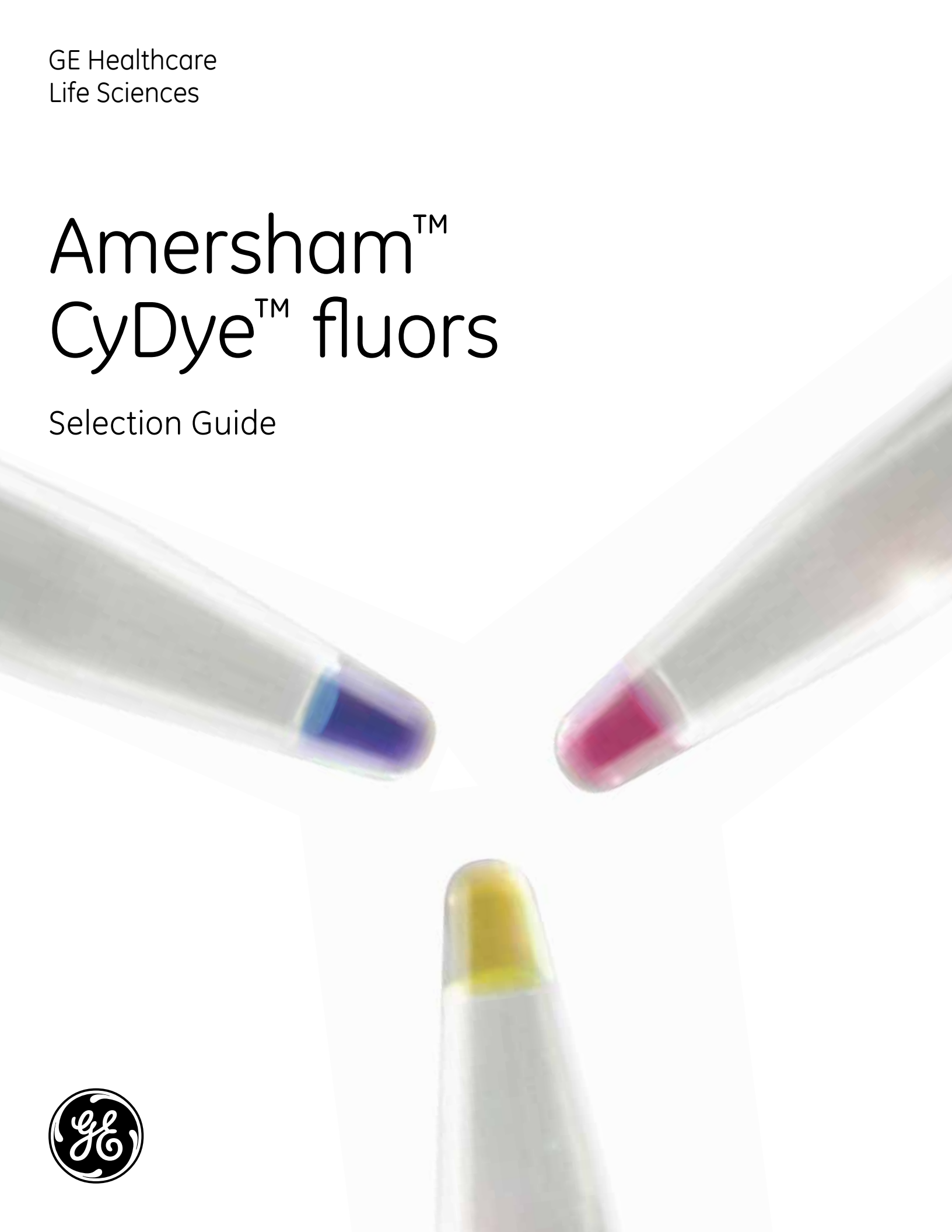
GE Healthcare
Life Sciences

Amersham™ CyDye™ fluors

Selection Guide

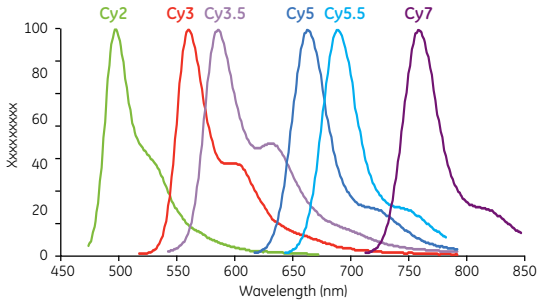


Welcome to Amersham CyDye fluors

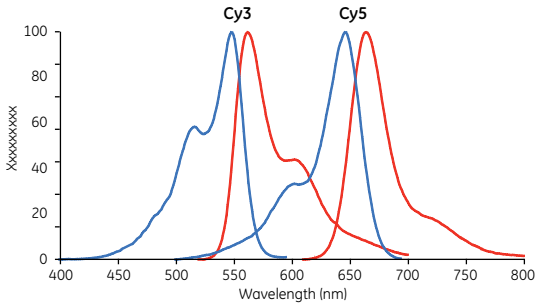
Amersham CyDye fluors are versatile fluorophores designed for a broad range of applications. CyDye fluors combine exceptional photostability with bright and intense signals, resulting in high sensitivity and a highly reproducible performance at a biologically suitable pH range of 3 to 10. The use of multicolor CyDye flours enables multiplexing without crosstalk. In addition, the CyDye flours 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

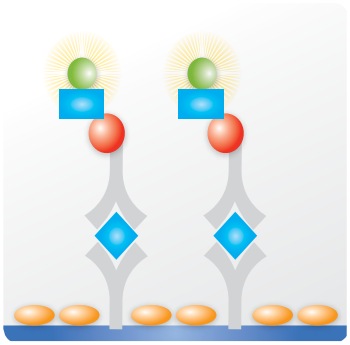


Excitation and emission profiles of Cy3 and Cy5



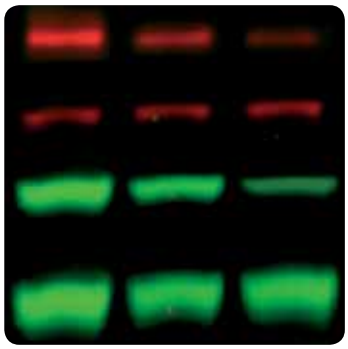
Spectral properties of CyDye fluors

	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

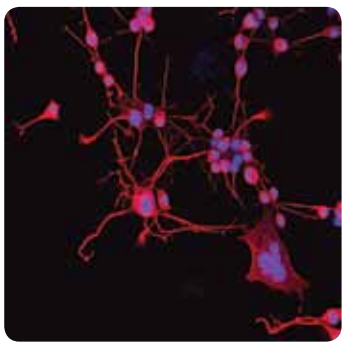


Fluorescent Western blotting

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

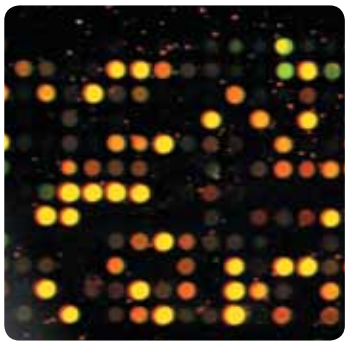
2-D DIGE

- 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



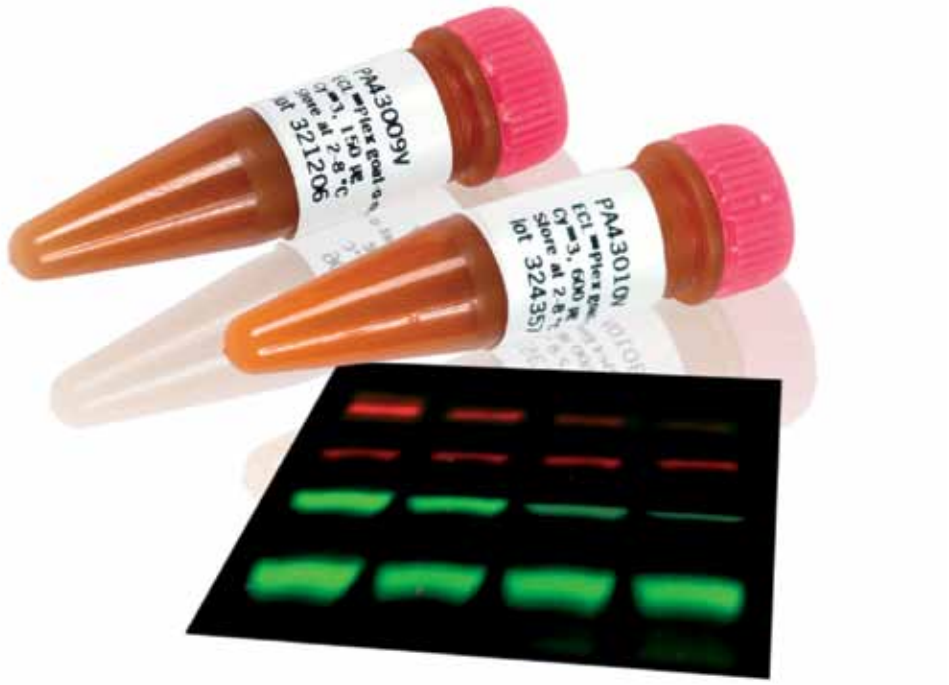
DNA, RNA, and oligo labeling

- For multicolor analysis in microarrays, aCGH, FISH, whole chromosome painting, karotyping, 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
5-packs								
Mono-Reactive CyDye packs								
Targeted and specific labeling of amine residues on antibodies, peptides, or oligonucleotides								
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					•	
Bis-Reactive CyDye packs								
Suitable for general labeling of amine residues								
Cy2 bis	5 × 1 mg	PA22000	•					
Cy3 bis	5 × 1 mg	PA23000		•				
Cy3.5 bis	5 × 1 mg	PA23500			•			
Cy5 bis	5 × 1 mg	PA25000				•		
Cy5.5 bis	5 × 1 mg	PA25500					•	
Mono-Reactive Maleimide CyDye packs								
A more selective method of antibody labeling that reduces the possibility of the label interfering with subsequent antibody-antigen reactions								
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
Value packs								
Mono-Reactive NHS ester								
Targeted and specific labeling of amine residues on antibodies, peptides, or oligonucleotides								
Cy3 mono NHS ester	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			•			
	50 mg	PA13602			•			
Cy5 mono NHS ester	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						•
	50 mg	PA17102						•
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
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		•				
	25 mg	PA13136		•				
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		•				
Cy3.5 mono hydrazide	1 mg	PA13621			•			
	5 mg	PA13620			•			
	25 mg	PA13626			•			
Cy5 mono hydrazide	1 mg	PA15121				•		
	5 mg	PA15120				•		
	25 mg	PA15126				•		
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								
Cy3 Select-a-Dye pack	3 × 0.5 mg	PA13123		•				
Cy5 Select-a-Dye pack	3 × 0.5 mg	PA15123				•		
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	•					
Cy3 mAb Labeling Kit		PA33001		•				
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^2 membrane area	PA45009	150 µg			•
ECL Plex goat-@-mouse IgG-Cy5, sufficient for 4000 cm^2 membrane area	PA45010	600 µg			•
ECL Plex goat-@-rabbit IgG-Cy5, sufficient for 1000 cm^2 membrane area	PA45011	150 µg			•
ECL Plex goat-@-rabbit IgG-Cy5, sufficient for 4000 cm^2 membrane area	PA45012	600 µg			•
ECL Plex goat-@-mouse IgG-Cy3, sufficient for 1000 cm^2 membrane area	PA43009	150 µg		•	
ECL Plex goat-@-mouse IgG-Cy3, sufficient for 4000 cm^2 membrane area	PA43010	600 µg		•	
ECL Plex goat-@-rabbit IgG-Cy3, sufficient for 1000 cm^2 membrane area	28-9011-06	150 µg		•	
ECL Plex goat-@-rabbit IgG-Cy3, sufficient for 4000 cm^2 membrane area	28-9011-07	600 µg		•	
ECL Plex goat-@-mouse IgG-Cy2, sufficient for 1000 cm^2 membrane area	28-9011-08	150 µg	•		
ECL Plex goat-@-mouse IgG-Cy2, sufficient for 4000 cm^2 membrane area	28-9011-09	600 µg	•		
ECL Plex goat-@-rabbit IgG-Cy2, sufficient for 1000 cm^2 membrane area	28-9011-10	150 µg	•		
ECL Plex goat-@-rabbit IgG-Cy2, sufficient for 4000 cm^2 membrane area	28-9011-11	600 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
CyDye labeled secondary antibodies							
High content cell-based assays are powerful tools in drug discovery and cellular screening. Fluorescently labeled second antibodies allow researchers to develop their own fixed-cell assays for novel targets.							
Cy2 labeled goat anti-mouse IgG, 1 mg	PA42002	•					
Cy2 labeled goat anti-rabbit IgG, 1 mg	PA42004	•					
Cy3 labeled goat anti-mouse IgG, 1 mg	PA43002		•				
Cy3 labeled goat anti-rabbit IgG, 1 mg	PA43004		•				
Cy5 labeled goat anti-mouse IgG, 1 mg	PA45002				•		
Cy5 labeled goat anti-rabbit IgG, 1 mg	PA45004				•		

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

DNA and RNA labeling

Feature	CyScribe™ First-Strand cDNA Labeling Kit	CyScribe Post-Labeling Kit	CyScribe aCGH Labeling kit
Signal brightness	++	+++	+++
Even incorporation of Cy3 and Cy5	++	+++	+++
Starting material	mRNA or total RNA	mRNA or total RNA	DNA from cells or amplified DNA
Quantity of starting material	5 to 25 µg of total RNA	5 to 25 µg of total RNA	1 ug of DNA
Quantity of starting material using mRNA	50 ng to 1 µg	100 to 500 ng	N/A
Possible to prepare a batch of unlabeled cDNA and store	No	Yes	No
Simplicity of protocol	+++	+	++++
Time from DNA / RNA to labeled target	3 h	5.5 h	3 h
Suitable for less experienced users	Yes	Less so	Yes

\+ *Suitable*
++ *Good*
+++ *Very Good*
++++ *Excellent*

	Quantity	Code no.	Product information
CyScribe labeling kits			
For the generation of Cy3- and Cy5-labeled cDNA for microarray hybridization analysis			
CyScribe First-Strand cDNA Labeling Kit	25 reactions	RPN6200	Provides reagents for preparation of Cy3 and Cy5 cDNA probes in first-strand cDNA synthesis reactions. Can be used with either Cy3 or Cy5 labeled dCTP and dUTP
CyScribe First-Strand cDNA Labeling System – dUTP	50 reactions	RPN6201	Contains ×2 RPN6200, 25 nmol Cy3-dUTP and 25nmol Cy5-dUTP
CyScribe First-Strand cDNA Labeling System – dCTP	50 reactions	RPN6202	Contains ×2 RPN6200, 25 nmol Cy3-dCTP and 25nmol Cy5-dCTP
CyScribe First-Strand cDNA Labeling System – dUTP with CyScribe GFX Purification Kit	50 reactions	RPN6201X	Contains ×2 RPN6200, 25 nmol Cy3-dUTP, 25nmol Cy5-dUTP and 50 Cyscribe GFX purification reagents
CyScribe First-Strand cDNA Labeling System – dCTP with CyScribe GFX Purification Kit	50 reactions	RPN6202X	Contains ×2 RPN6200, 25 nmol Cy3-dCTP, 25nmol Cy5-dCTP and 50 Cyscribe GFX purification reagents
CyScribe Post-Labeling Kit	24 reactions	RPN5660	Provides reagents for preparation of post-labeled Cy3 and Cy5 cDNA probes
CyScribe Array CGH Genomic DNA Labeling Kit	30 reactions	28909726	For *in vitro* labeling of genomic DNA using Cy3 and Cy5 dCTP
CyScribe Array CGH Genomic DNA Labeling System	30 reactions	28919956	Contains ×1 28909726, plus ×1 illustra GFX PCR DNA and Gel Band Purification Kit (28-9034-70)

	Quantity	Code no.	Product information
CyDye Fluorescent Nucleotides			
CyDye labeled nucleotides are available in a range of bright, intense colors with narrow emission bands			
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
HyPer5™ Microarray Dye			
HyPer5 dCTP	25 nmol	28-9231-83	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH7.0
HyPer5 dCTP	250 nmol	28-9231-84	Supplied as a 1 mM solution, in 10 mM phosphate buffer, pH7.0
Multipack containing 5 × 25 nmol Cy3 dCTP + 5 x 25 nmol HyPer5 dCTP	5 × 25 nmol Cy3 dCTP + 5 × 25 nmol HyPer5 dCTP	28-9231-85	Cy3 and HyPer5 labeling dCTP
Cy3 and HyPer5 Post-Labeling Reactive Dye Pack	12 × 40 000 pmol Cy3 + 12 × 15 000 pmol HyPer5	28-9224-19	Cy3 and HyPer5 reactive 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
Single Fluorescence				
ImageQuant™ LAS 4000 mini	•			
ImageQuant LAS 4000	•	•	•	
ImageQuant LAS 4010	•	•	•	
ImageQuant LAS 7000	•	•	•	
Typhoon™ FLA 9500	•	•	•	
Multiplex Fluorescence				
ImageQuant LAS 4010	(•)	•	•	Multiplex can be run as duplex either with Cy2/Cy5 or Cy3/Cy5
Typhoon FLA 9500	•	•	•	
DIGE				
Typhoon FLA 9500	•	•	•	

For more information or to place your order, please visit **www.gelifesciences.com** or contact your local GE distributor.

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imagination at work

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