

IRDyes

IRDyes overview

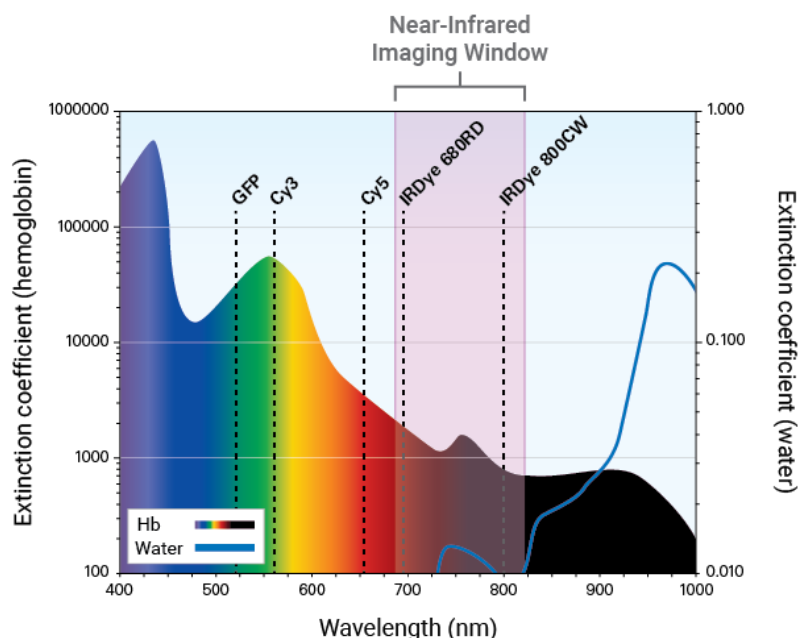
Dye	Ex. _{max} (nm)*	Em. _{max} (nm)*	NHS Ester	Malei mide	Carbox ylate	DBCO	Azide	Alkyne	Phosphor amidite	LI-COR Channel
IRDye 800CW	778	794	avail.	avail.	avail.	avail.	avail.	avail.		800 nm
IRDye 800RS	770	786	avail.							800 nm
IRDye 800 phosphoramidite	787	812							avail.	800 nm
IRDye 750	766	776	avail.	avail.						
IRDye 700DX	680	687	avail.							700 nm
IRDye 700 phosphoramidite	680	697							avail.	700 nm
IRDye 680LT**	680	694	avail.	avail.						700 nm
IRDye 680RD	680	694	avail.	avail.	avail.	avail.	avail.	avail.		700 nm
IRDye 650	651	668	avail.	avail.		avail.	avail.	avail.		

IRDye Near-Infrared Dyes are optimized for **excitation and detection in the near-infrared spectrum**, providing benefits.

Low background autofluorescence allows higher signal to noise ratios (see Figure)

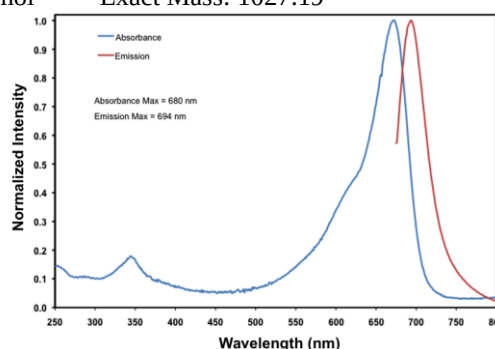
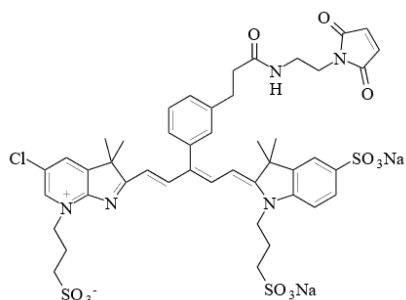
Excellent photostability
Dye brightness

Figure : **Animal tissue absorbs visible light.** Hemoglobin (Hb) and other tissue components strongly absorb visible light. In the NIR region, where infrared agents are detected, tissue absorbance is dramatically reduced. Above 820 nm, light absorbance by water begins to increase



IRDye 680RD

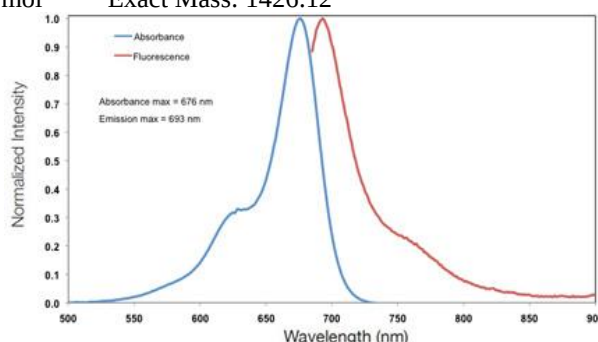
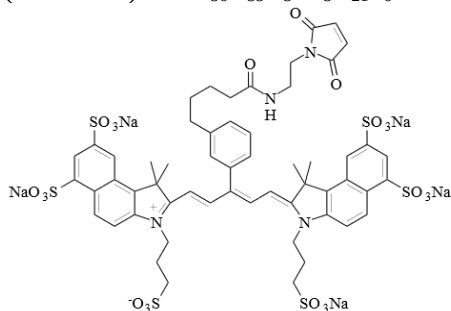
A/E: 680/694nm (Methanol) 672/694nm(water) EC: 170 000(Methanol), 165 000(water)
(Maleimide) $C_{45}H_{48}ClN_5Na_2O_{12}S_3$ MW: 1028.51 g/mol Exact Mass: 1027.19



IRDye 680RD is the near-infrared fluorescent dye of choice for small animal imaging, Western blot, and In-Cell Western Assay applications in the 700nm channel. It has the lowest background compared to LI-COR's other 700 nm dyes and can be used for the widest variety of applications with little optimization.

IRDye 680LT

A/E: 680/694nm (Methanol) 672/694nm(water) EC: 250 000(Methanol), 250 000(PBS)
(Maleimide) $C_{56}H_{55}N_5Na_5O_{21}S_6$ MW: 1427.37 g/mol Exact Mass: 1426.12

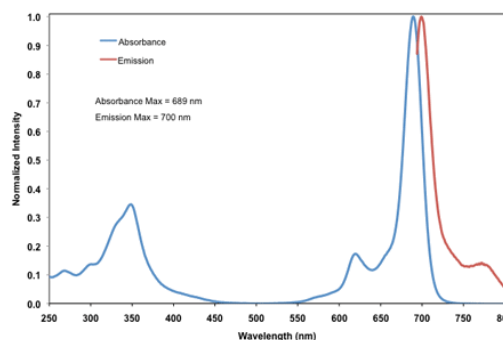
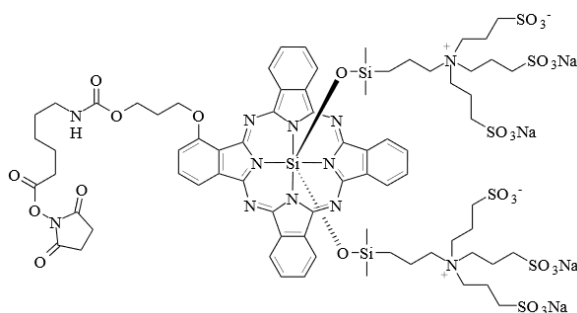


IRDye 680LT is significantly brighter and more photostable than many other 700 nm near-infrared dyes such as Alexa Fluor® 680. It provides superior performance for protein detection applications, including microscopy and Western blot applications. Dilution optimization may be required to achieve best results.

Not recommended for: In-Cell Western Assay On-Cell Western Assay
RNAi Screens Small Animal Imaging

IRDye 700DX

A/E: 680/687nm (Methanol) 689/700nm(water) EC: 170 000(Methanol), 165 000(water)
(Maleimide) $C_{74}H_{96}N_{12}Na_4O_{27}S_6Si_3$ MW: 1095.21 g/mol Exact Mass: 1952.37

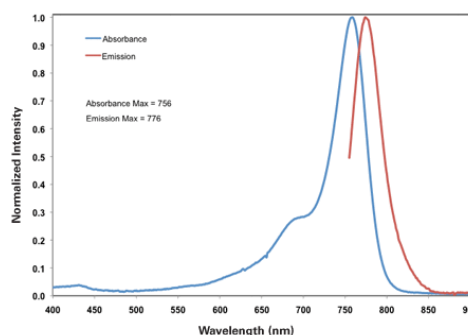
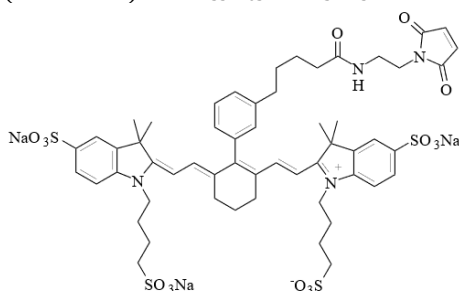


IRDye 700DX is the most photostable 700 nm dye offered by LI-COR. This phthalocyanine dye has robust properties that make it suitable for optical imaging when conjugated to antibodies, receptor-binding ligands, small molecules, and more. It is considerably less sensitive to photobleaching than many other organic fluorochromes, and has excellent water solubility and salt tolerance.

Contact your local distributor Uptima, powered by

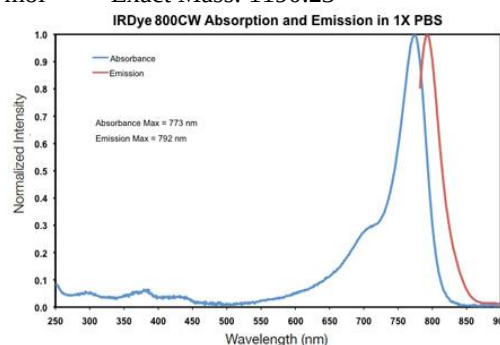
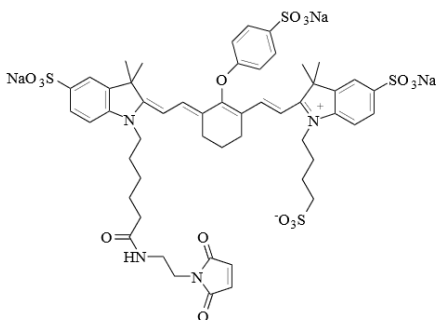
IRDye 750

A/E: 766/776nm (Methanol) 756/776nm(water) EC: 330 000(Methanol), 260 000(water)
(Maleimide) $C_{55}H_{63}N_4Na_3O_{15}S_4$ MW: 1217.33 g/mol Exact Mass: 1216.29



IRDye 800CW (le plus renommé avec le 680R)

778/794nm (Methanol) 774/789nm(water) EC: 330000(Methanol), 240 000(water)
(Maleimide) $C_{52}H_{57}N_4Na_3O_{16}S_4$ MW: 1191.25 g/mol Exact Mass: 1190.23

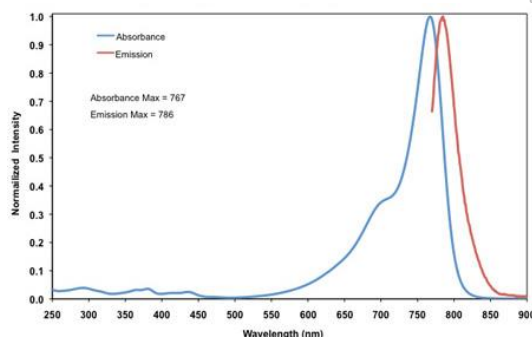
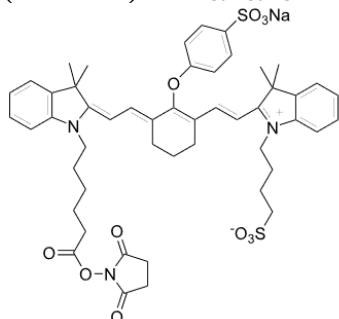


IRDye 800CW near-infrared dye is characterized by high water solubility and salt tolerance, low non-specific binding to cellular components, and a high signal-to-noise ratio.

IRDye 800CW fluorescent dyes can be used for protein and antibody labeling, or nucleic acid applications with high labeling density. The 800 nm channel near-infrared dyes are superior for Western blotting and immunocytochemical assays, including In-Cell Western™ assays and On-Cell Western cell-based assays, as well as for protein arrays, microscopy, tissue section imaging, and in vivo imaging and optical probe development.

IRDye 800RS

A/E: 770/786nm (Methanol) 767/786nm(water) EC: 300 000(Methanol), 20 000(water)
(Maleimide) $C_{50}H_{56}N_3NaO_{11}S_2$ MW: 962.12 g/mol Exact Mass: 961.33 130.00/0.5mg



Related products and documents

• **FluoProbes fluorescent dyes,**

functionalized by NHS ([BA6810](#)), Maleimide ([BA6810](#)), Azide ([YE4970](#)), Alkyne ([YE4970](#)), Hydrazide ([1Q7081](#)), DBCO (-), Amino ([BA6790](#)), Carboxyl ([FH9770](#)). Protein labeling kits ()

	A/E	EC	MW(NHS)	P/N (NHS)	Remark
FluoProbes®752	752 / 800	270 000	1028.1	FP-BF6570	Great for sequencing
FluoProbes®782	782 / 800	102 000	976.1	FP-IS1960	(-3) Alternative to IRD 800
FluoProbes®805	800 / 824	150 000	964.04	FP-N494S0	
FluoProbes®800	777 / 791	280 000	1050.2	FP-JV1850	(-3) Alternative to IRD 800
FluoProbes®820	823 / 843	200 000	1005.14	FP-B465C0	
FluoProbes®831	844 / -	220 000	886.1	FP-BU5030	Negatively charged
FluoProbes®845	847 / 876	160 000	1159.26	I	
FluoProbes®865	863 / 896	190 000	1181.26	I	

• **CYanine dyes**

functionalized by NHS ([BB7493](#)), Maleimide ([JO6660](#)), Azide ([HO7250](#)), Alkyne ([1A6320](#)), Hydrazide ([LQV050](#)), DBCO ([DQP790](#): CycloAlkynes, for strain-promoted Click reactions), Amino ([CY3AM0](#)), Carboxyl ([CY3CA0](#)). 3Dye 2D DIGE (CY2/CY3/CY5) labeling kit ([EV0870](#))

• **BrDIPY dyes (or FluProbes Neutral dyes, BOron-DIPYromethène)**

functionalized by NHS ([23383A/FL](#)), Maleimide ([AWHFB1](#)), Amine ([AWHF70](#)), Carboxyl ([M1270A](#)), Azide ([AWHF81](#)), DBCO ([B35T42](#)), Tetrazine ([B35TG0](#)), Hydrazide ([853579](#)), Alkyne ([AS29U1](#)), Cholesterol ([U47711](#))

• **AF dyes (equivalent to AlexaFluor)**

functionalized by NHS ([R08112](#)), Maleimide ([820731](#)), Hydrazide ([846631](#)), Azide ([AXCJ91](#)), Alkyne ([AXCECA](#)), DBCO ([B432L1](#)), Amine (), Carboxyl ()

• **other advanced biochemistry technologies**^[PH]

and much more at the [BioSciences Innovations catalogue](#) and [e-search tool](#).

Ordering information

Catalog size quantities and prices may be found at <http://www.interchim.com>.

For any information, please ask : Uptima / Interchim; Hotline : +33(0)4 70 03 73 06

Disclaimer : Materials are sold **for research use only**, and are not intended for food, drug, household, or cosmetic use. Interchim is not liable for any damage resulting from handling or contact with this product.

Rev.U05E