



Promega

Fluorophores Guide

February 2010





Promega Corporation

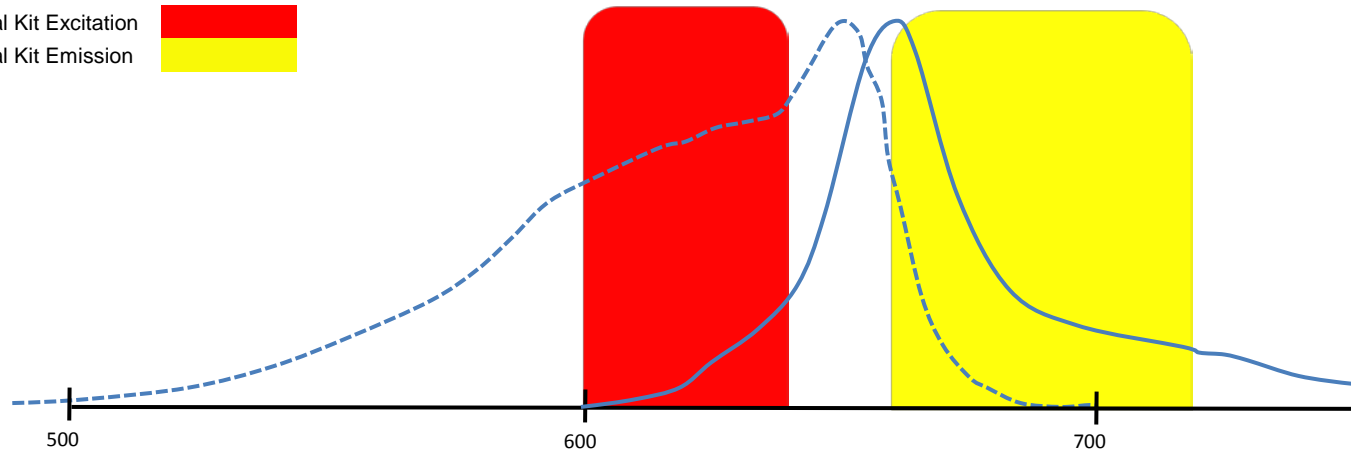
Life Science Detection Instruments

645 N Mary Ave - Sunnyvale CA 94085

Phone: 408.636.2400 - Toll Free: 888.636.2401 - www.promega.com



Allophycocyanin



Allophycocyanin Excitation 
Allophycocyanin Emission 
Red Optical Kit Excitation 
Red Optical Kit Emission 

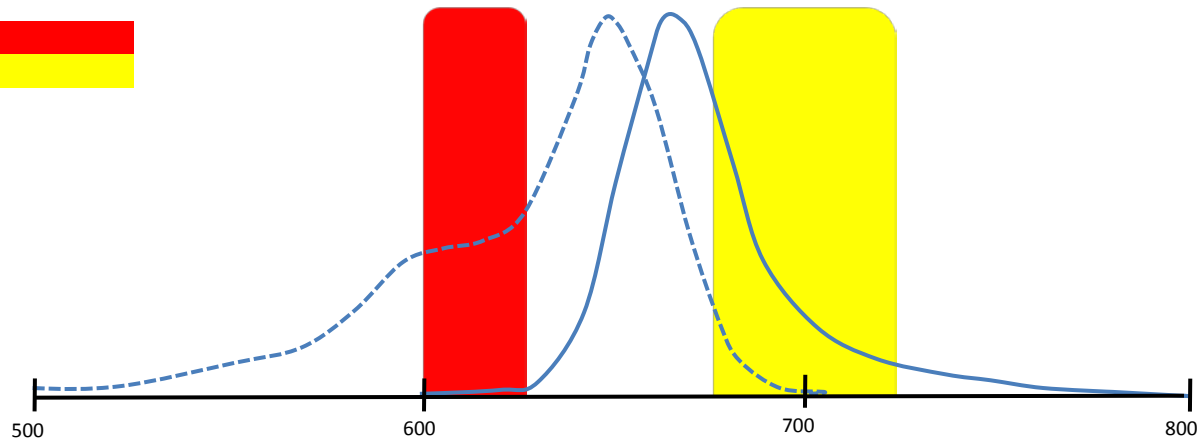


Uses: Can be conjugated to antibodies and other proteins

Cy5



Cy5 Excitation 
Cy5 Emission 



Red Optical Kit Excitation 
Red Optical Kit Emission 

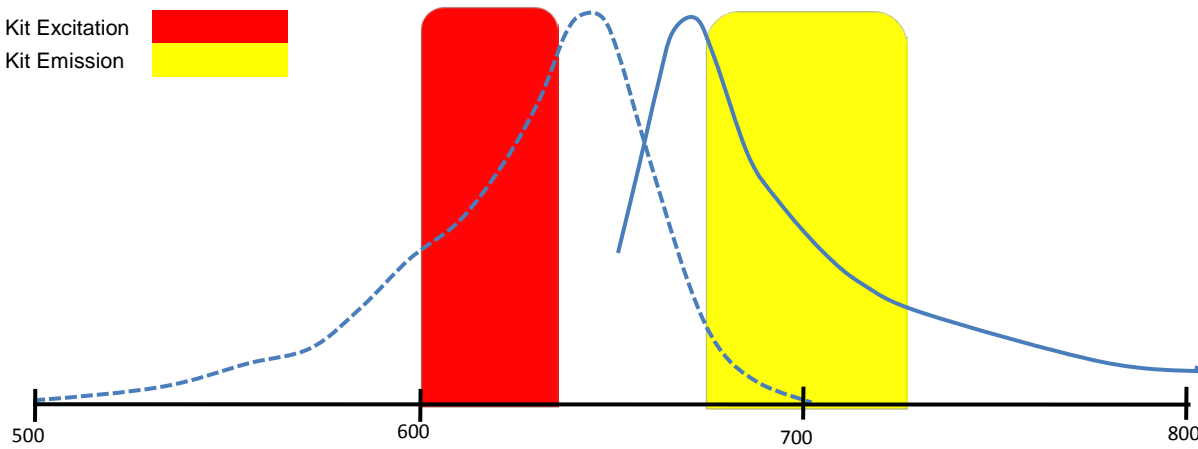


Uses: Typically linked to nucleic acids or proteins for various studies including proteomics and RNA translocation studies.

DRAQ5™

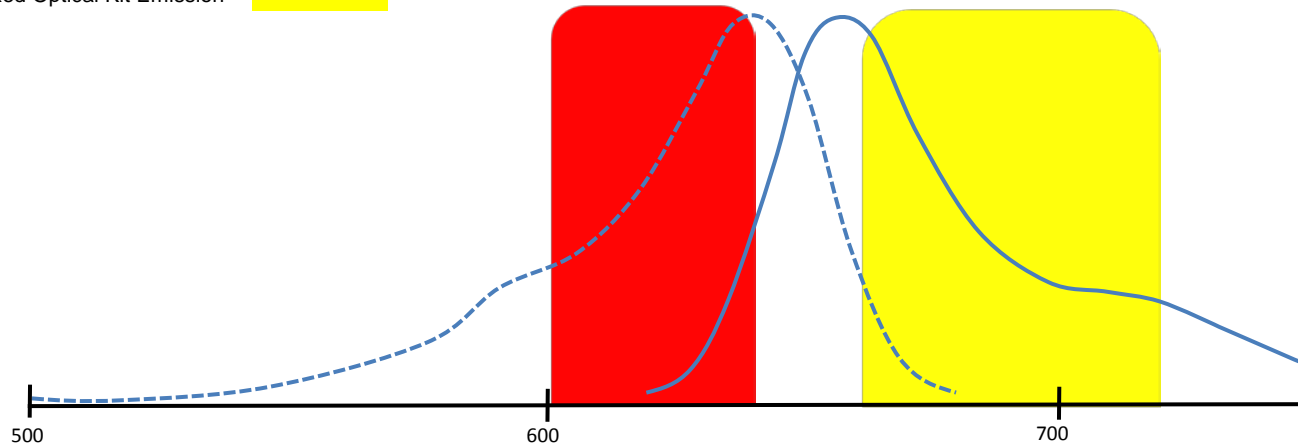
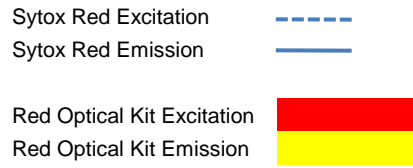
DRAQ 5 Excitation 
DRAQ 5 Emission 

Red Optical Kit Excitation 
Red Optical Kit Emission 





Uses: DRAQ5™ is a novel far-red fluorescent DNA dye that can be used in LIVE cells in combination with other common fluors, especially GFP fusions & FITC-tags



SYTOX® Red

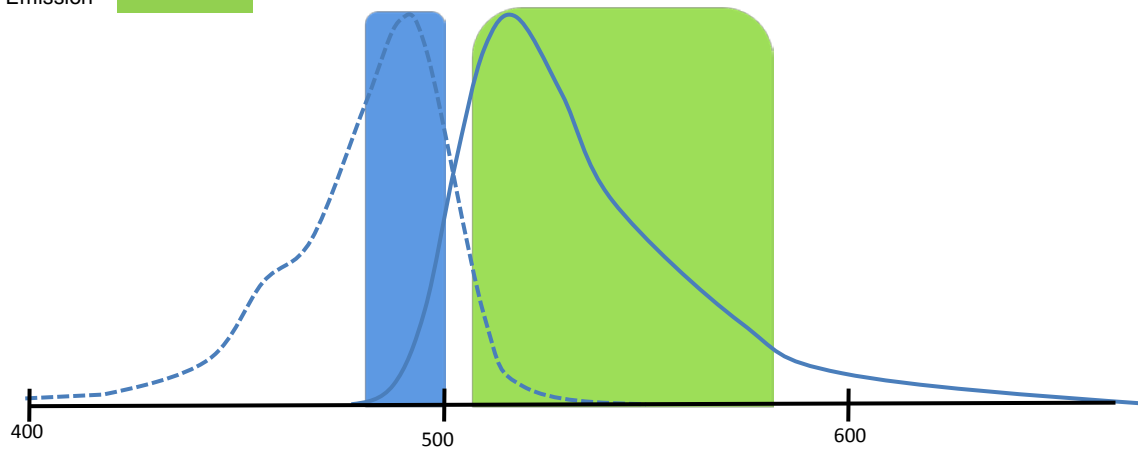


Uses: SYTOX® Red is a membrane-impermeant nuclear stain that marks cells with compromised plasma membranes.

5-FAM



5-FAM Excitation 
5-FAM Emission 



Blue Optical Kit Excitation 
Blue Optical Kit Emission 

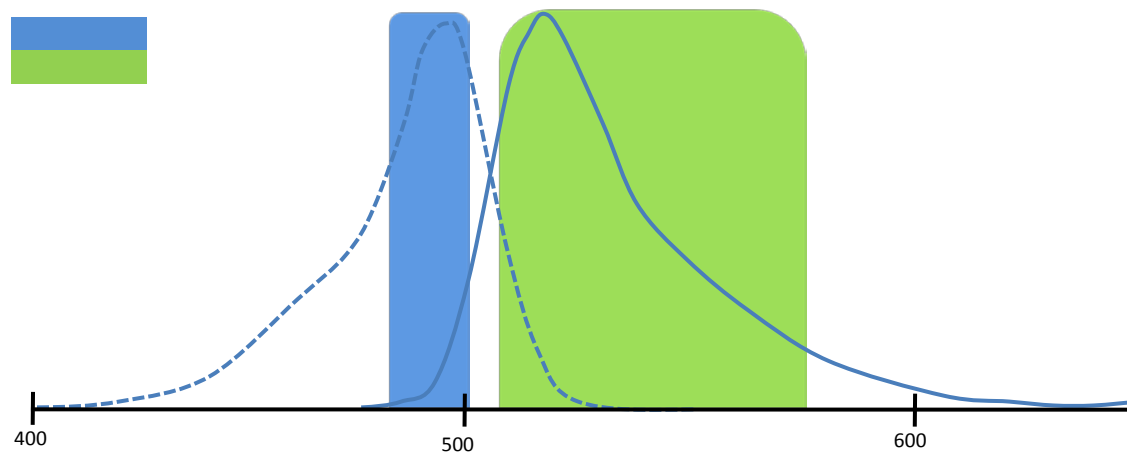


Uses: A derivative of Fluorescein that has is used for in situ labeling of peptides, proteins, and nucleotides.

Calcein



Calcein Excitation 
Calcein Emission 



Blue Optical Kit Excitation 
Blue Optical Kit Emission 

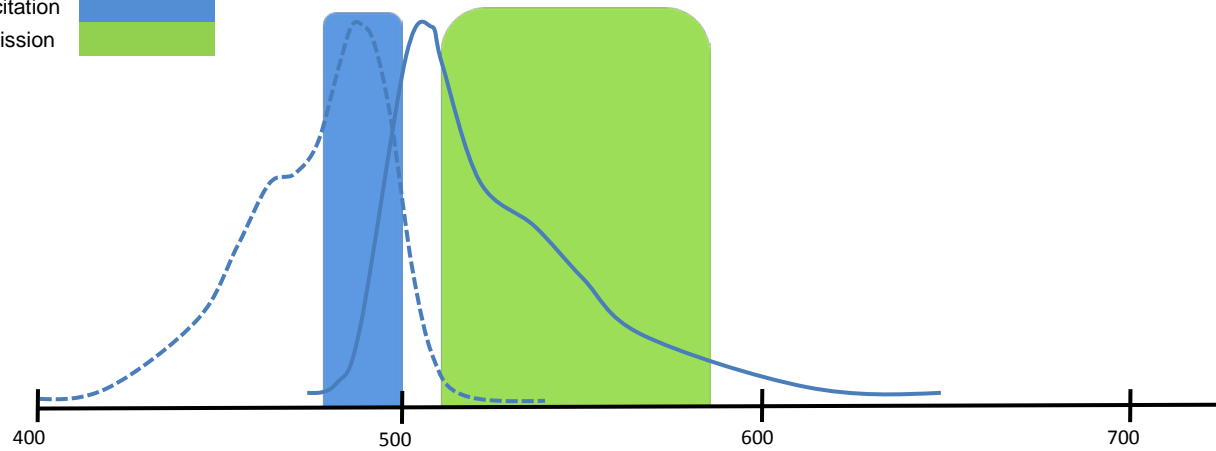


Uses: A calcium indicator that is often used to determine cell viability

DiO



DiO Excitation 
DiO Emission 



Blue Optical Kit Excitation 
Blue Optical Kit Emission 

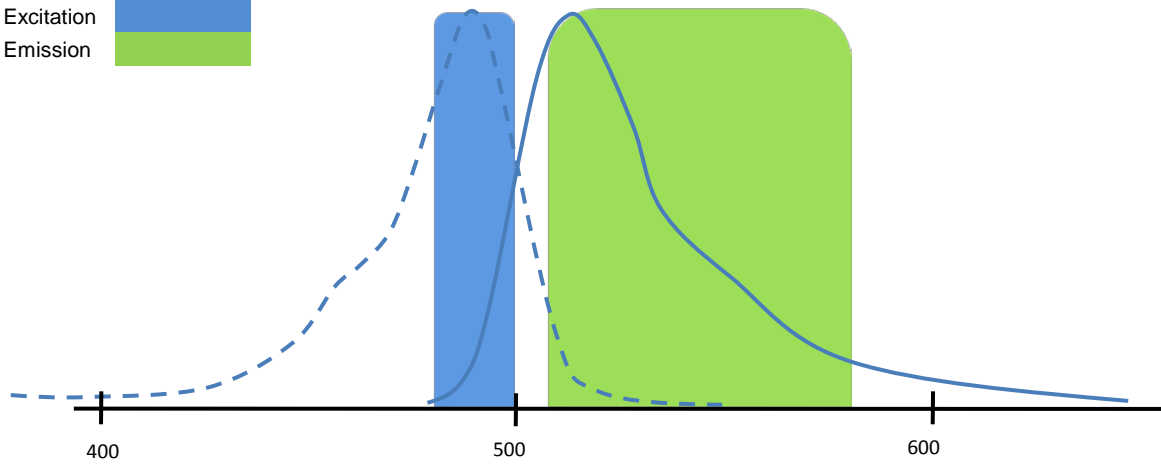


Uses: Used in cell-cell fusion, cellular adhesion, migration and Live/Dead applications.

Fluorescein



Fluorescein Excitation 
Fluorescein Emission 



Blue Optical Kit Excitation 
Blue Optical Kit Emission 

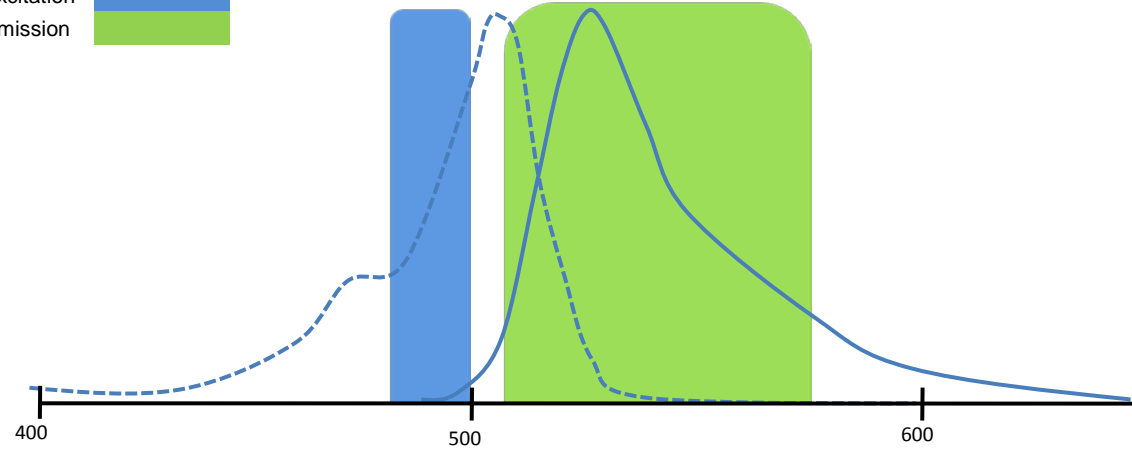


Uses: Fluorescein is often used for in situ labeling of peptides, proteins, and nucleotides.

Fluo-3



Fluo-3 Excitation 
Fluo-3 Emission 



Blue Optical Kit Excitation 
Blue Optical Kit Emission 

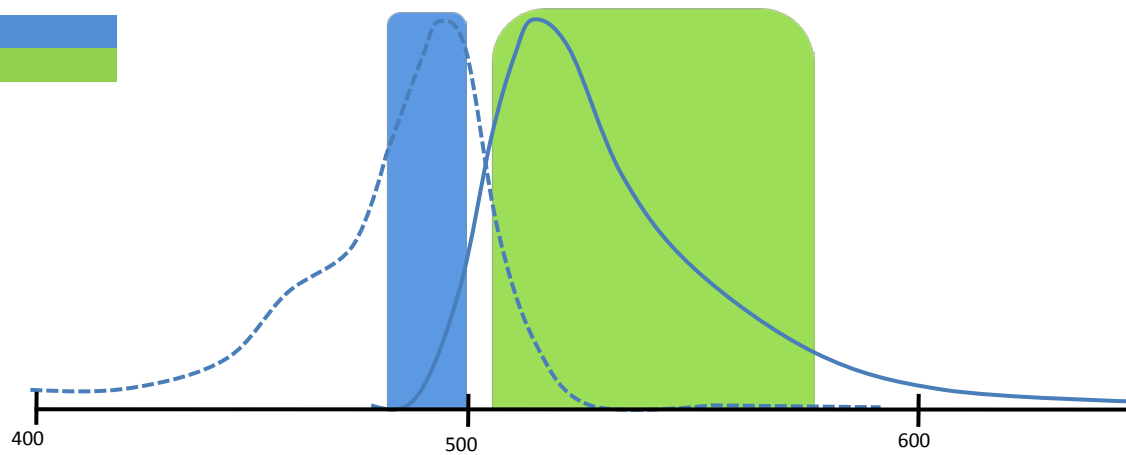


Uses: A high affinity Ca⁺⁺ indicator that is commonly used to measure cell signalling.

Fluo-4



Fluo-4 Excitation 
Fluo-4 Emission 



Blue Optical Kit Excitation 
Blue Optical Kit Emission 

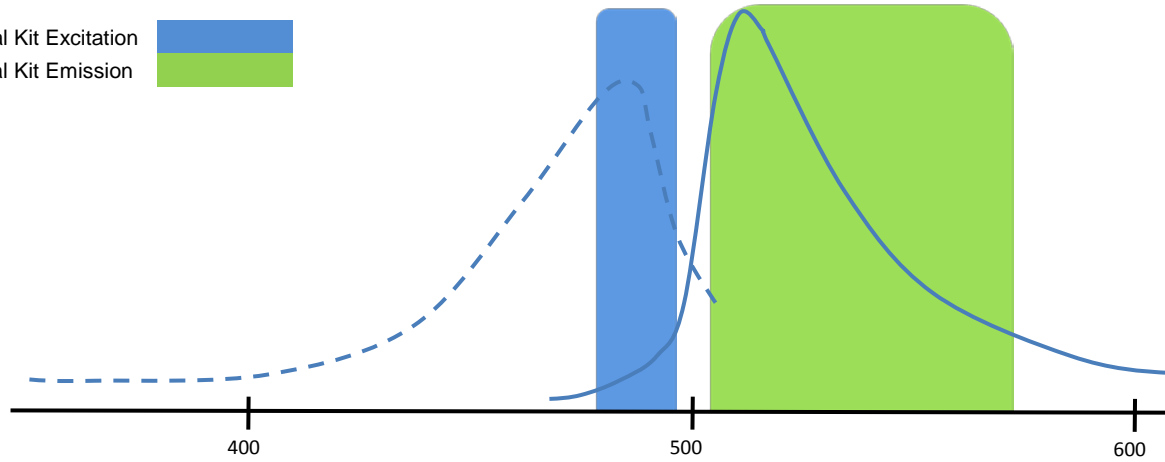


Uses: A high affinity Ca^{++} indicator that is commonly used to measure cell signalling, brighter and more stable than Fluo-3.

EGFP



EGFP Excitation 
EGFP Emission 



Blue Optical Kit Excitation 
Blue Optical Kit Emission 

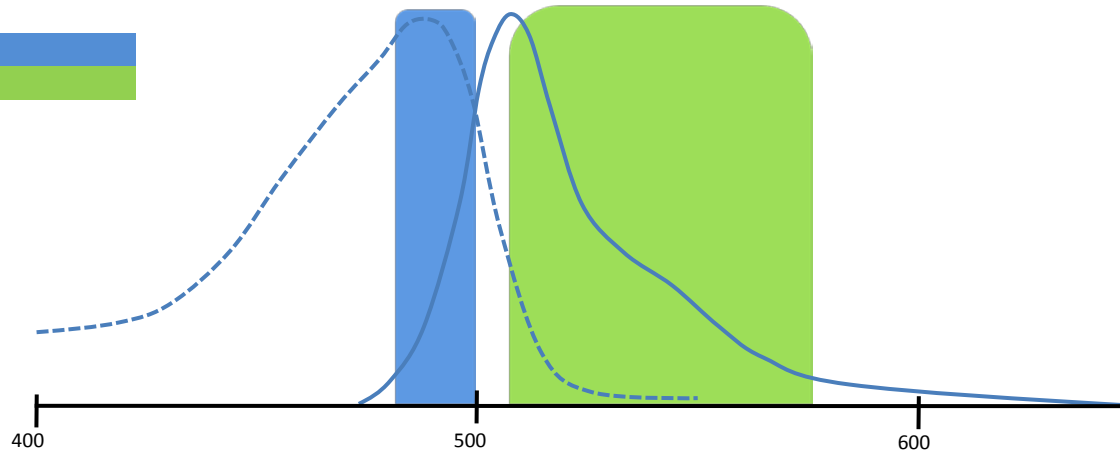


Uses: When the gene encoding for EGFP is inserted into the host genome, the encoded protein enables both the tracking of tagged proteins and their expression levels.

GFP





GFP Excitation 
GFP Emission 

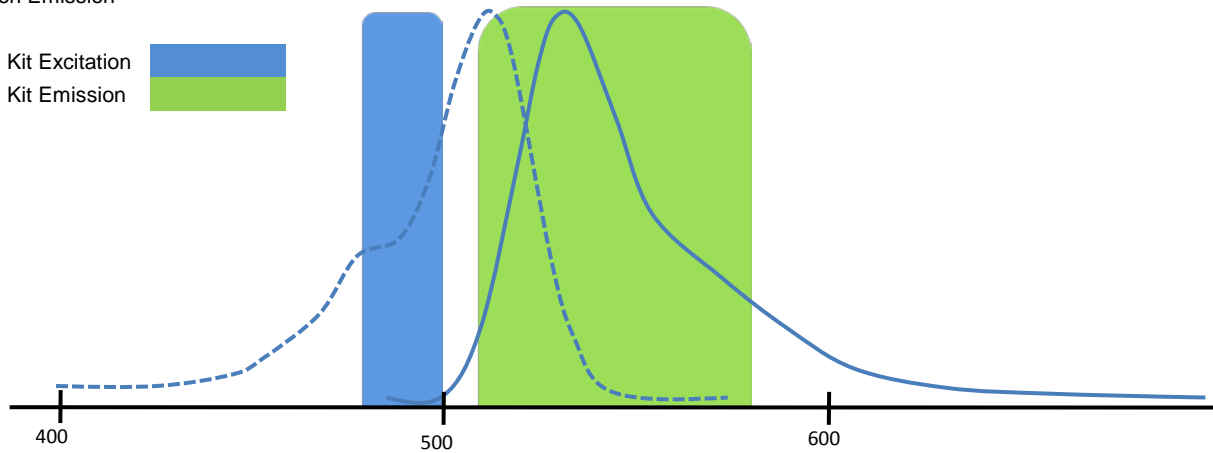
Blue Optical Kit Excitation 
Blue Optical Kit Emission 



Uses: When the gene encoding for GFP is inserted into the host genome, the encoded protein enables both the tracking of tagged proteins and their expression levels.





Oregon Green

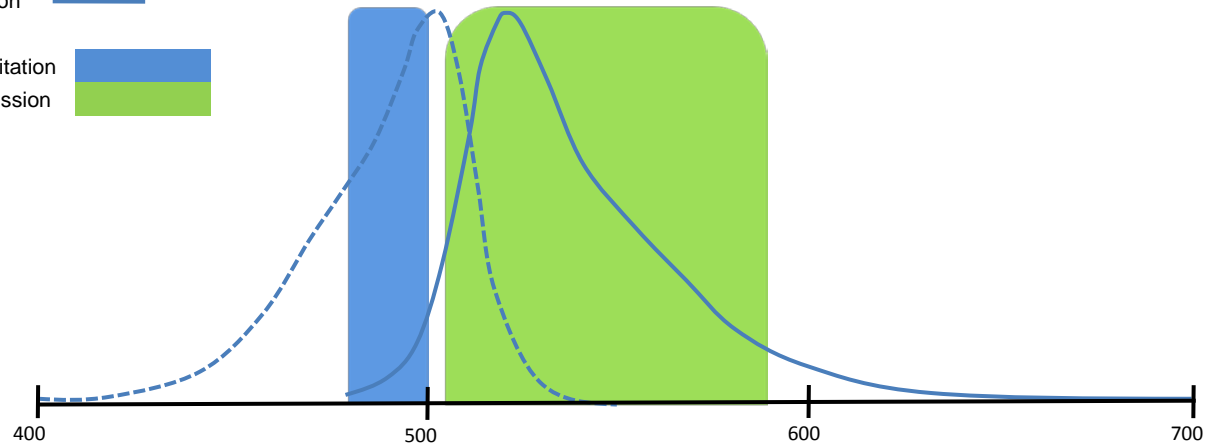
Oregon Green Excitation 
Oregon Green Emission 
Blue Optical Kit Excitation 
Blue Optical Kit Emission 



Uses: Can be conjugated to antibodies and other proteins.





Pico Green

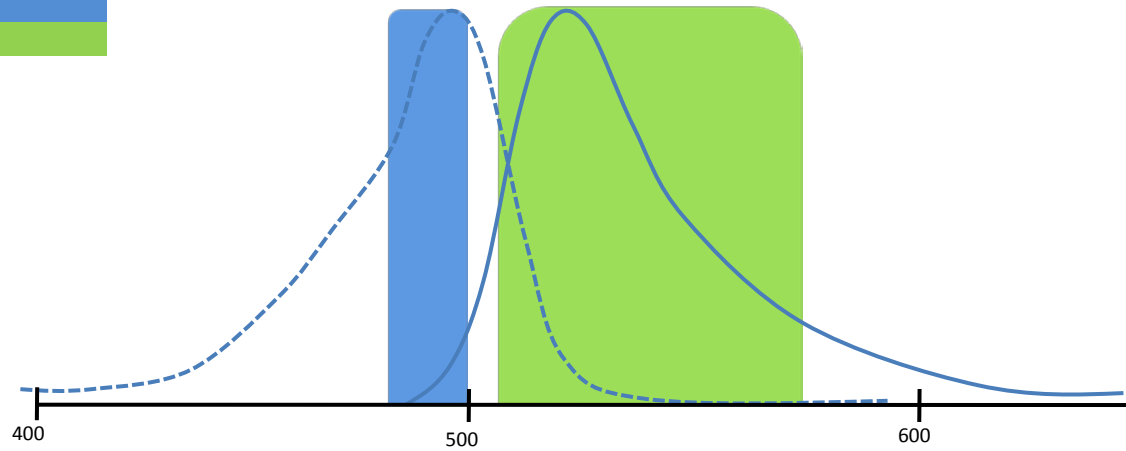
PicoGreen® Excitation 
PicoGreen® Emission 
Blue Optical Kit Excitation 
Blue Optical Kit Emission 



Uses: A dsDNA quantitation reagent used for quantitating DNA concentrations



Rhodamine Green



Rhodamine Green™ Excitation 
Rhodamine Green™ Emission 
Blue Optical Kit Excitation 
Blue Optical Kit Emission 

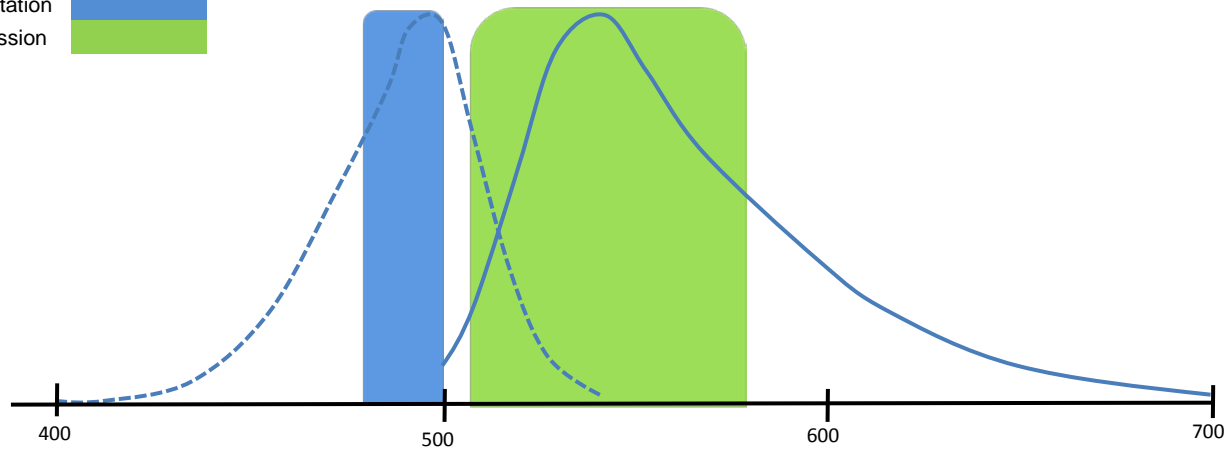


Uses: Can be conjugated to antibodies and other proteins

SYBR Gold





SYBR Gold Excitation 
SYBR Gold Emission 

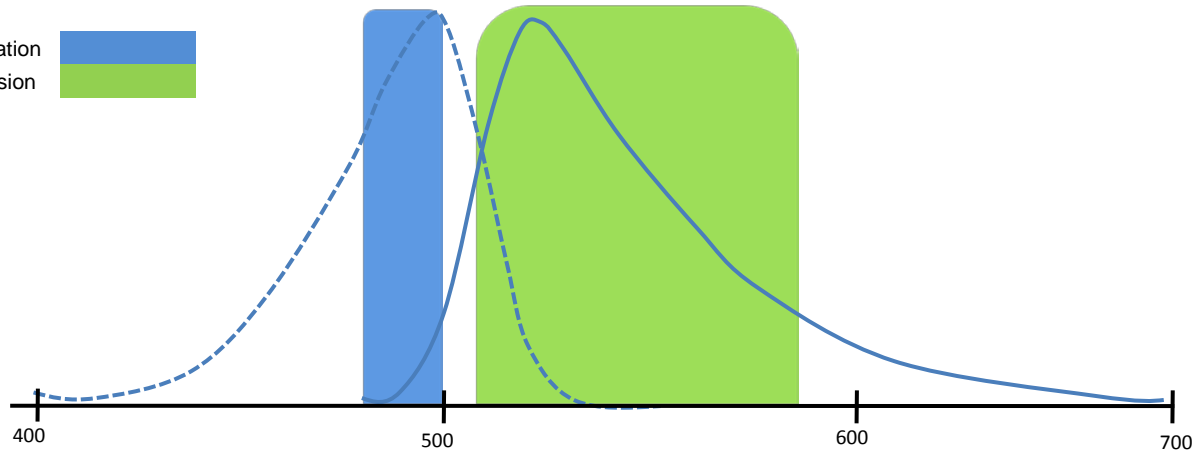
Blue Optical Kit Excitation 
Blue Optical Kit Emission 



Uses: nucleic acid stain used for detecting dsDNA, ssDNA or RNA.

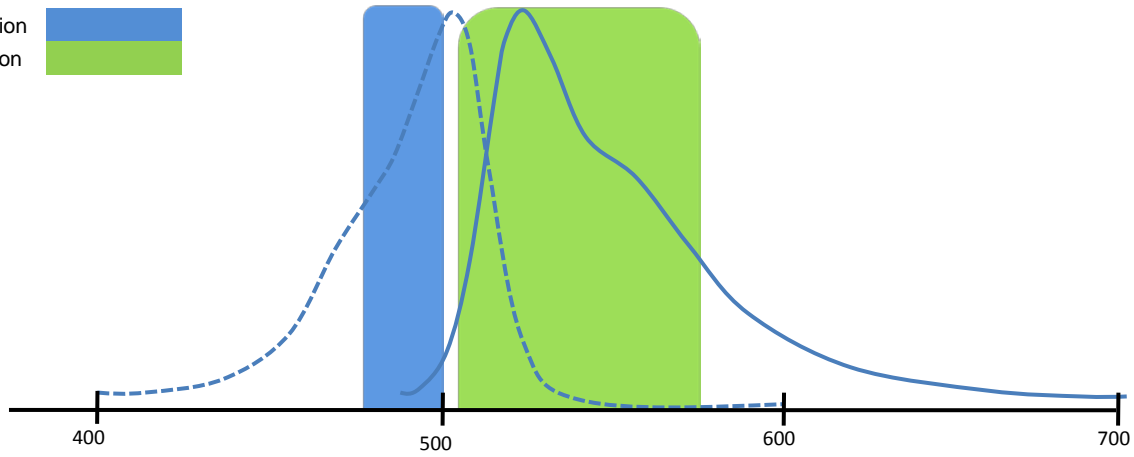
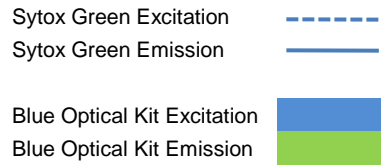
SYBR Green

SYBR Green Excitation 
SYBR Green Emission 
Blue Optical Kit Excitation 
Blue Optical Kit Emission 





Uses: used as a dye for the quantification of double stranded DNA.



Sytox Green

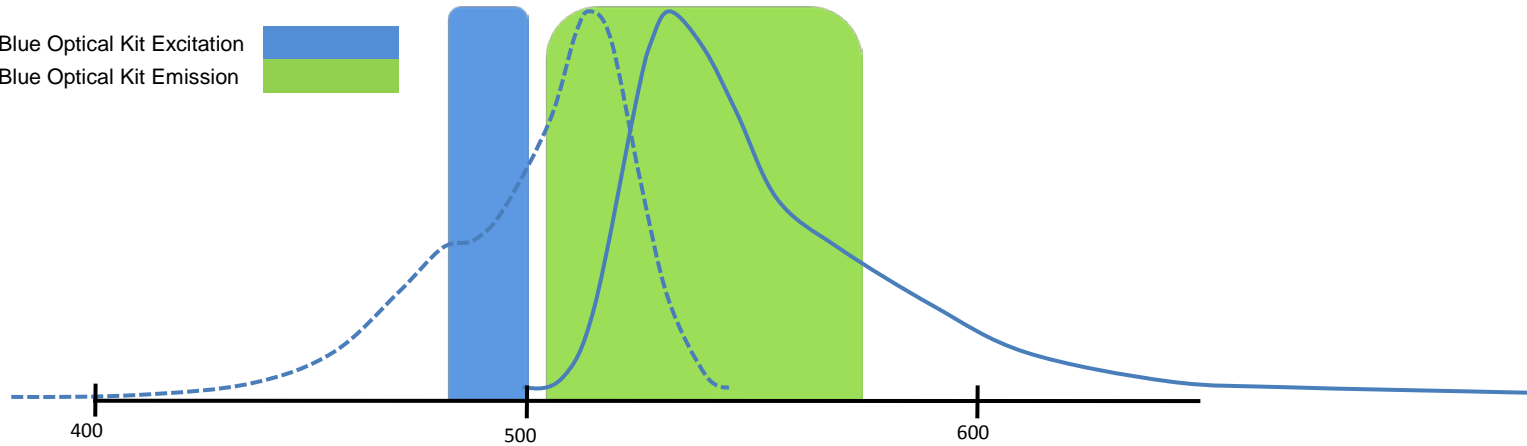


Uses: SYTOX® Green is a membrane-impermeant nuclear stain that mark cells with compromised plasma membranes.

YFP



YFP Excitation 
YFP Emission 



Blue Optical Kit Excitation 
Blue Optical Kit Emission 

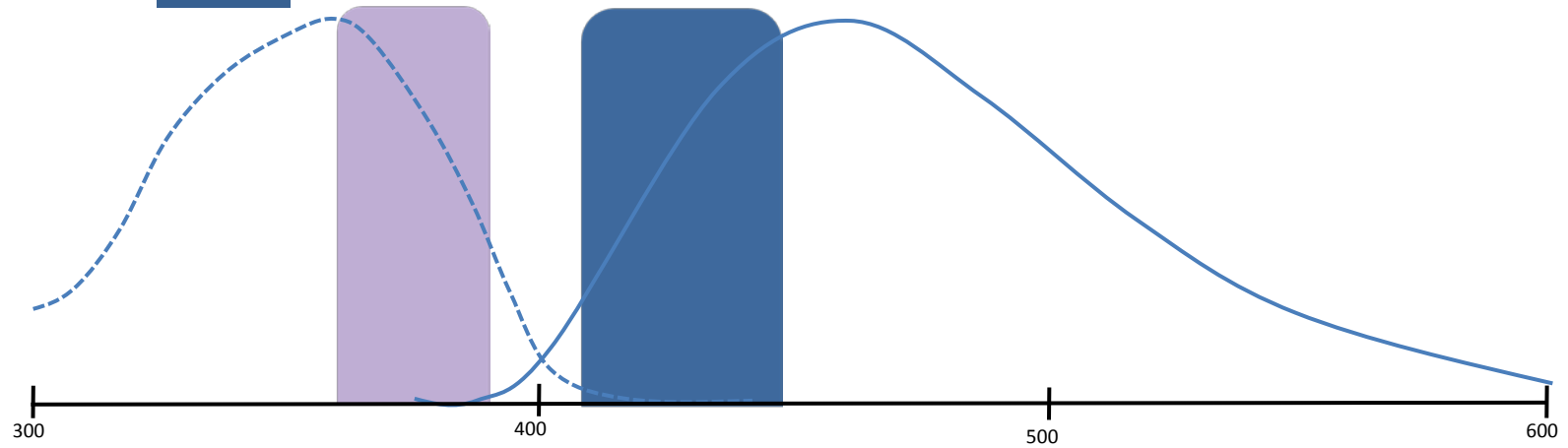


Uses: A genetic mutant of GFP, when encoded the protein enables both the tracking of tagged proteins and their expression levels.

Dapi

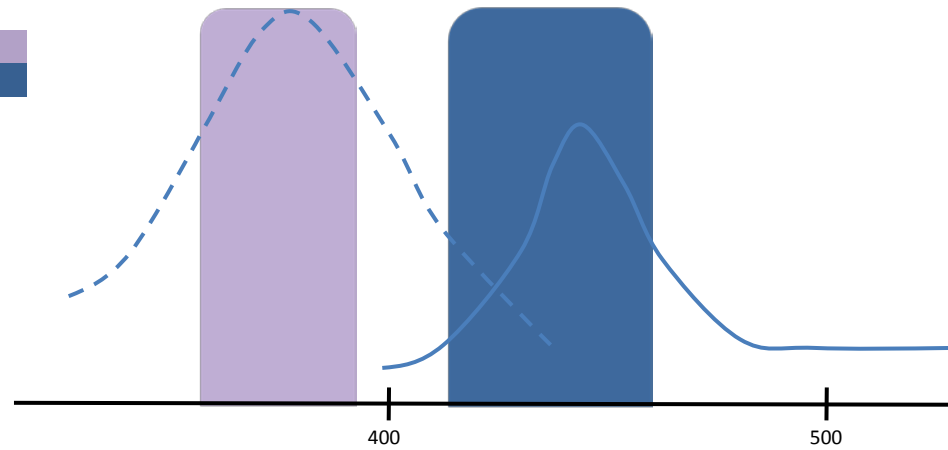
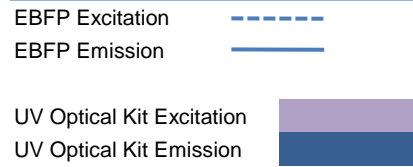
Dapi Excitation 
Dapi Emission 

UV Optical Kit Excitation 
UV Optical Kit Emission 





Uses: Binds strongly to DNA and is typically used to stain both live and dead cells.



EBFP

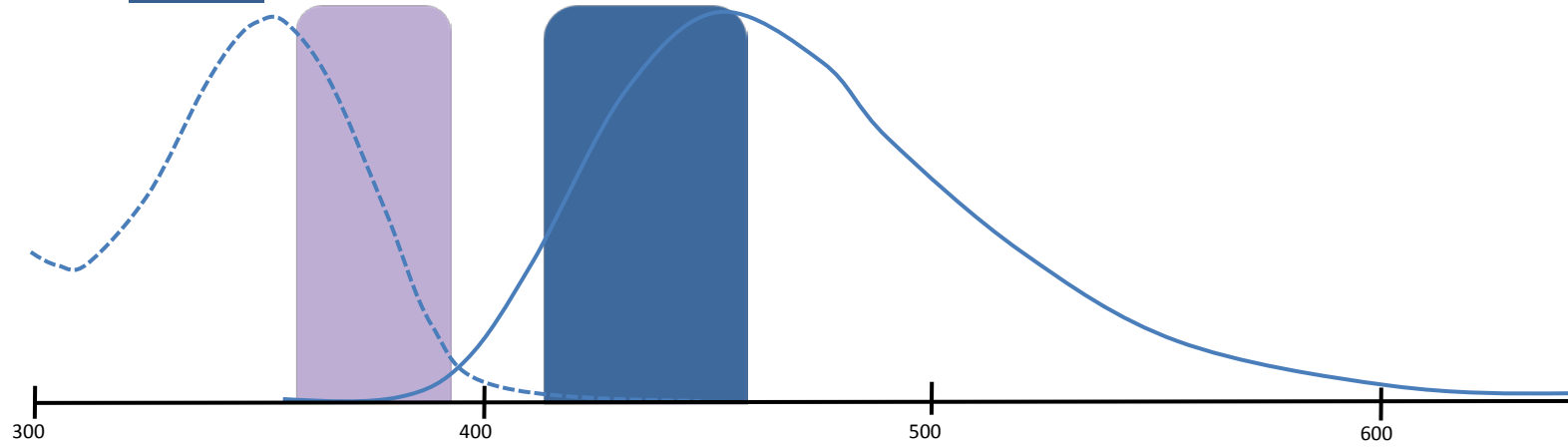


Uses: When the gene encoding for EBFP is inserted into the host genome, the encoded protein enables both the tracking of tagged proteins and their expression levels.

Hoechst



Hoechst Excitation 
Hoechst Emission 



UV Optical Kit Excitation 
UV Optical Kit Emission 

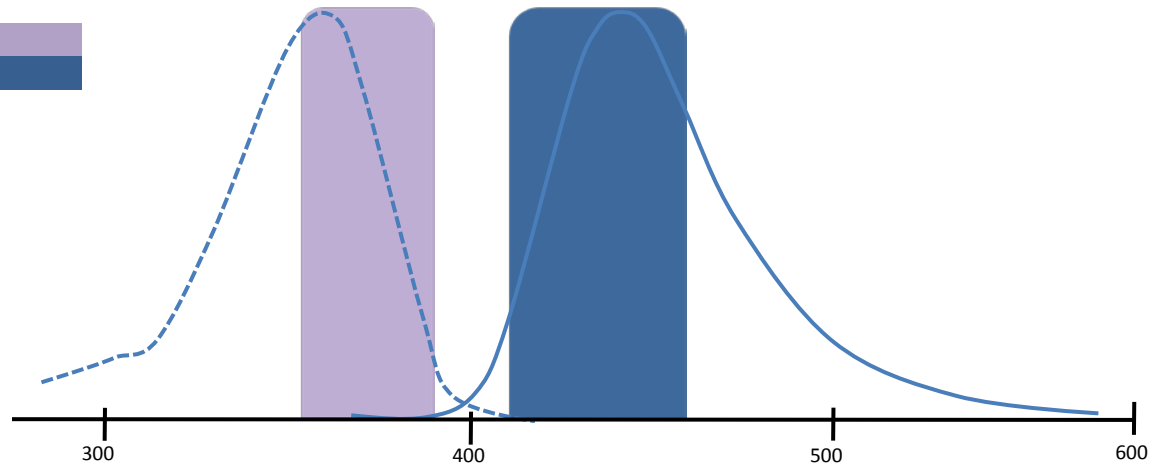


Uses: An intercalating dye that binds strongly to DNA.

7-hydroxy-4-methylcoumarin





7-hydroxy-4-methylcoumarin Excitation 
7-hydroxy-4-methylcoumarin Emission 

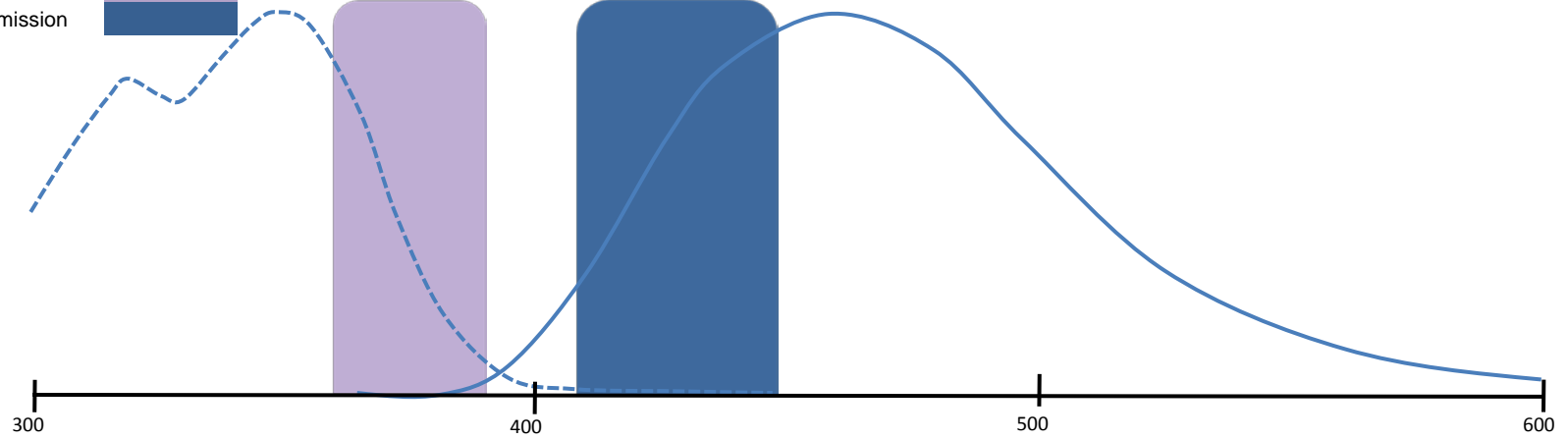
UV Optical Kit Excitation 
UV Optical Kit Emission 



Uses: A labelling reagent often used for preparing protein and nucleic acid conjugates of blue fluorescence.



Quinine Sulfate



Quinine Sulfate Excitation 
Quinine Sulfate Emission 
UV Optical Kit Excitation 
UV Optical Kit Emission 

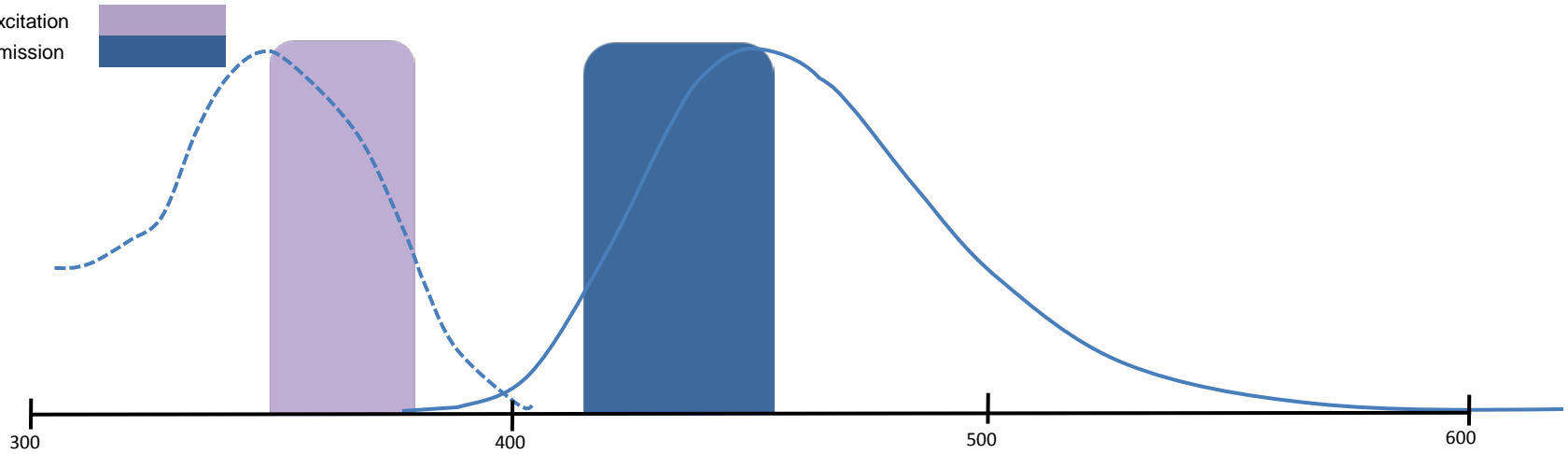


Uses: Reference standard for measuring fluorescence quantum yield.

4-methyl-umbelliferone

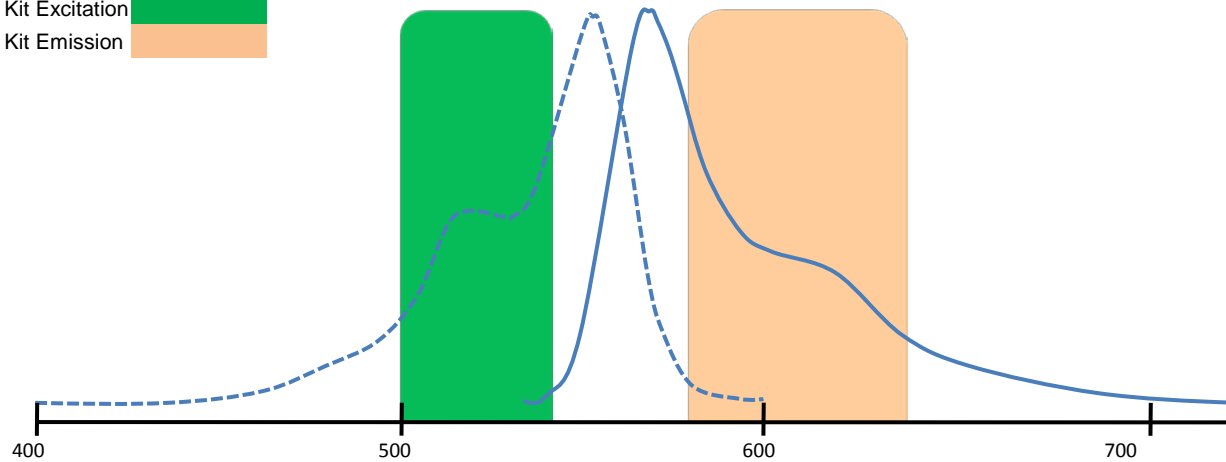
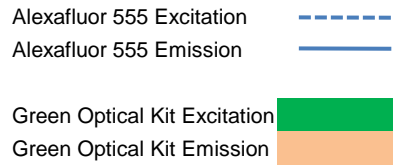
4-methyl-umbelliferone Excitation 
4-methyl-umbelliferone Emission 

UV Optical Kit Excitation 
UV Optical Kit Emission 





Uses: Substrate recognized by β -galactosidase as a means of measuring Reporter gene activity.



Alexafluor 555

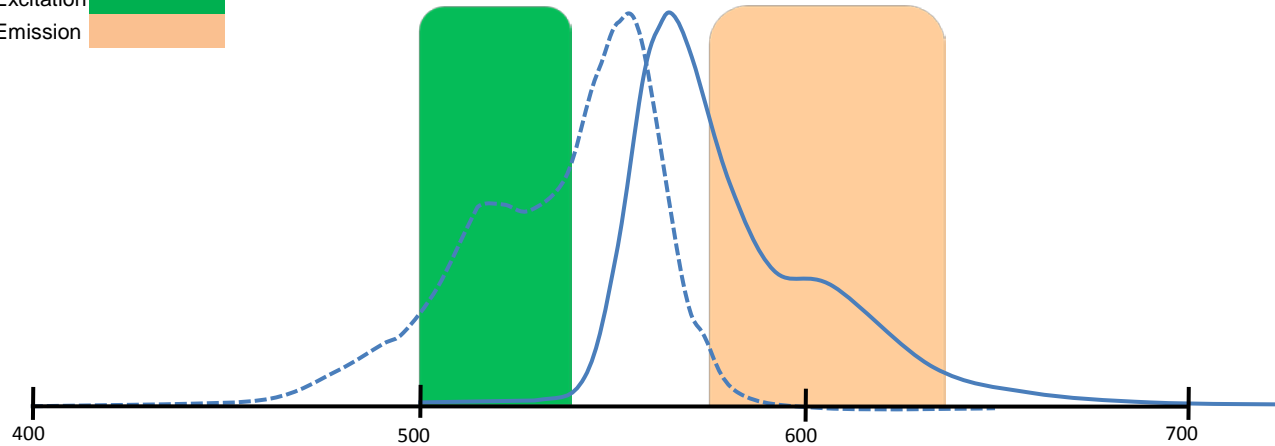


Uses: Can be conjugated to antibodies and other proteins

Cy3

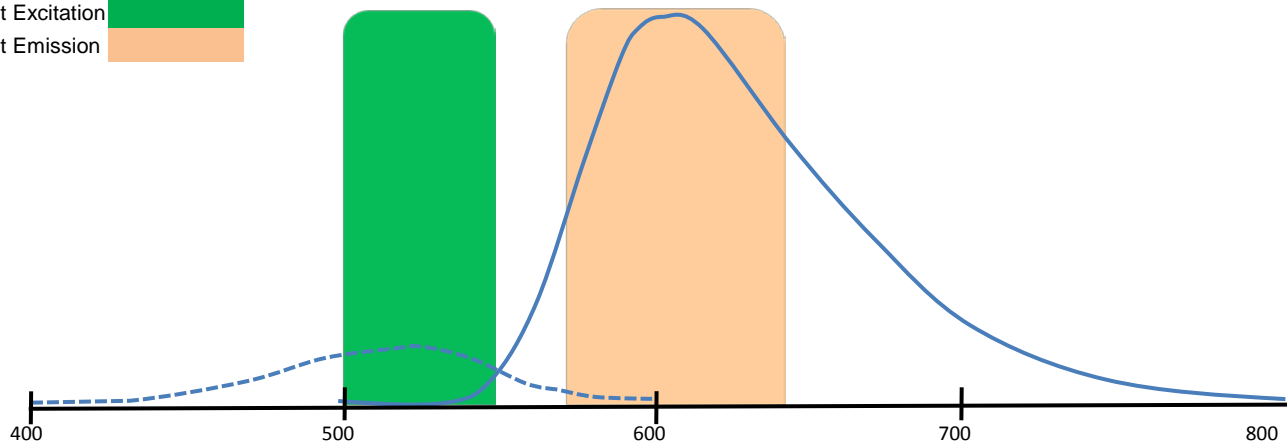
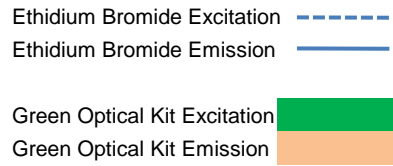
Cy3 Excitation 
Cy3 Emission 

Green Optical Kit Excitation 
Green Optical Kit Emission 



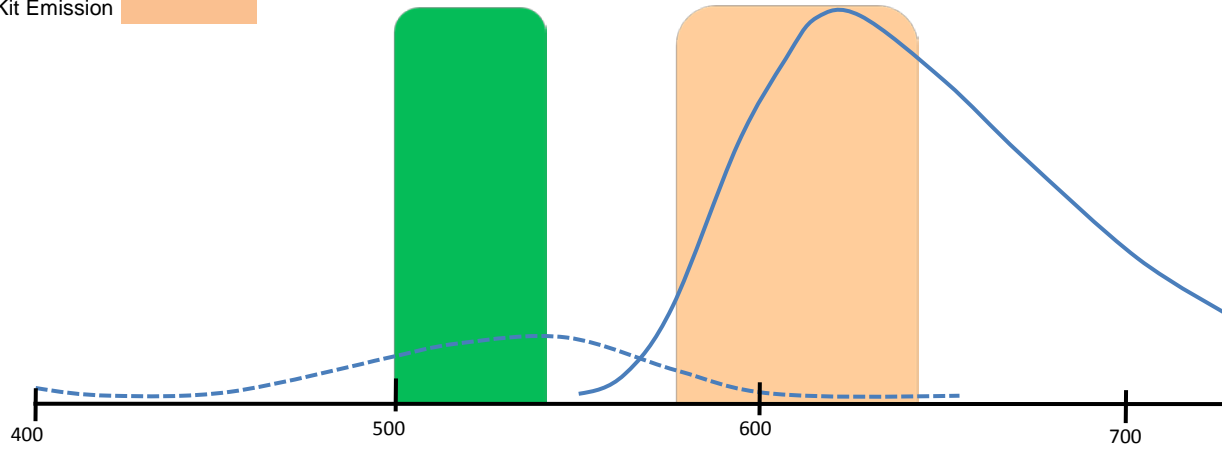
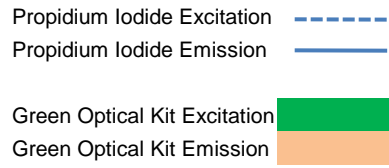
Uses: Typically linked to nucleic acids or proteins for various studies including proteomics and translocation studies.

Ethidium Bromide



Uses: An intercalating dye that binds strongly to DNA.

Propidium Bromide

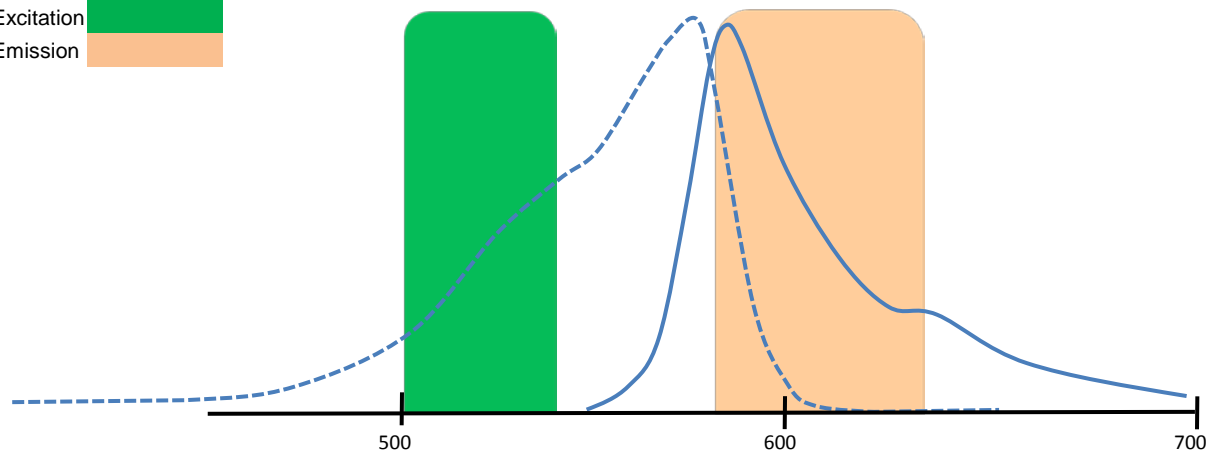


Uses: An intercalating dye that binds strongly to DNA.

Resorufin



Resorufin Excitation - - - -
Resorufin Emission _ _ _ _



Green Optical Kit Excitation █
Green Optical Kit Emission █

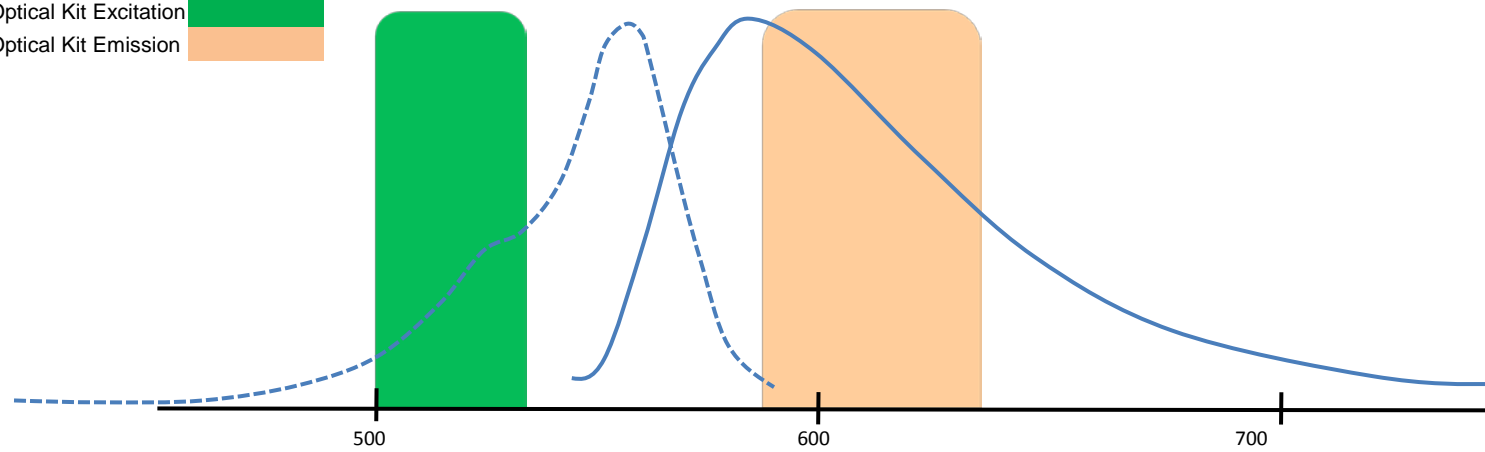


Uses: Fluorogenic substrate used for measuring Cytochrome P450 activity.

RFP



RFP Excitation 
RFP Emission 



Green Optical Kit Excitation 
Green Optical Kit Emission 

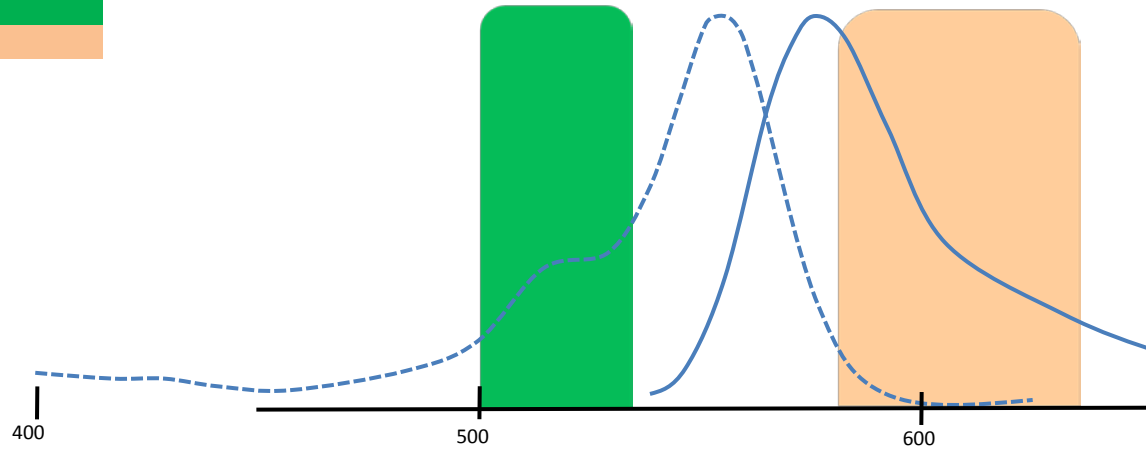


Uses: A spectrally distinct companion or substitute for the green fluorescent protein (GFP).

Rhod-2





Rhod-2 Excitation 
Rhod-2 Emission 

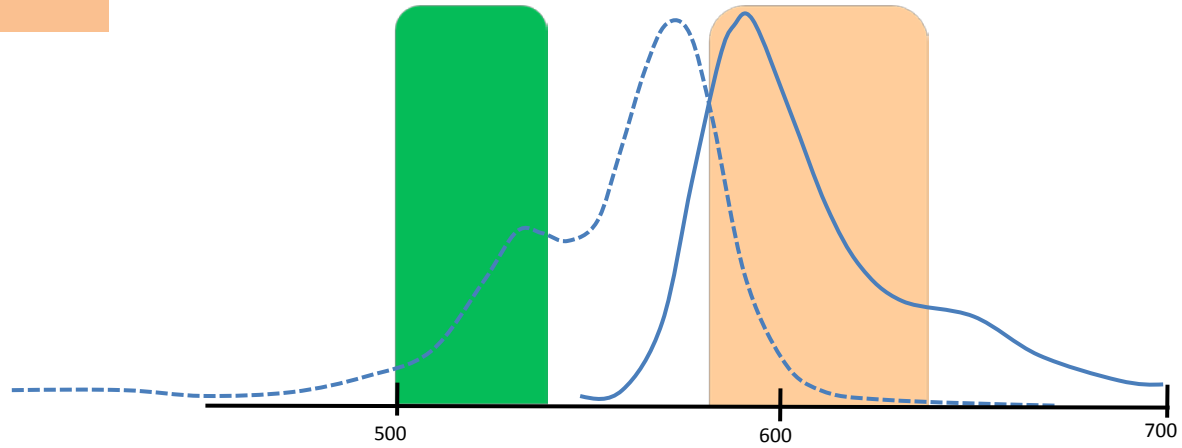
Green Optical Kit Excitation 
Green Optical Kit Emission 



Uses: a high affinity Ca⁺⁺ indicator, suitable for longer term calcium measurements.

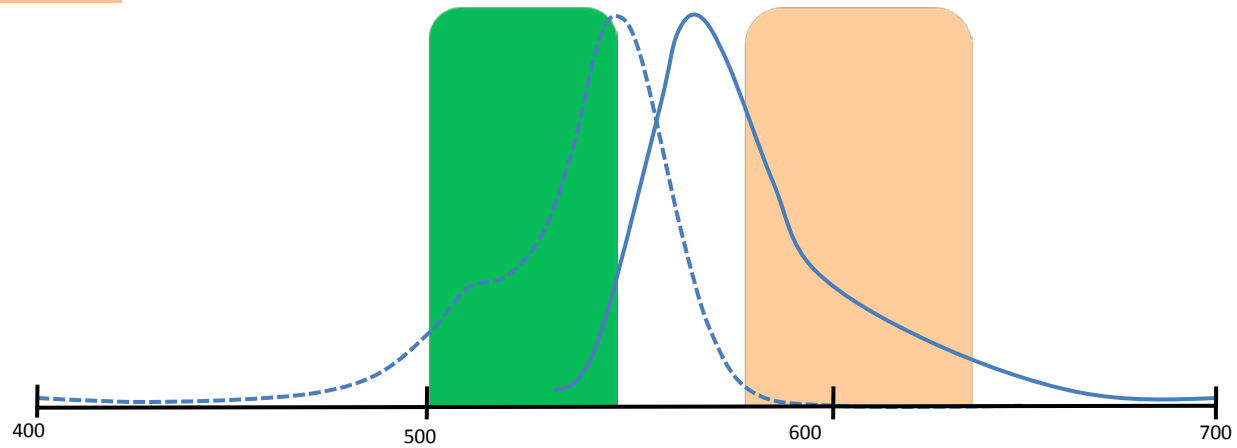
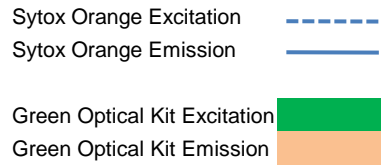
Rhodamine Red

Rhodamine Red Excitation 
Rhodamine Red Emission 
Green Optical Kit Excitation 
Green Optical Kit Emission 





Uses: Can be conjugated to antibodies and other proteins.



Sytox Orange

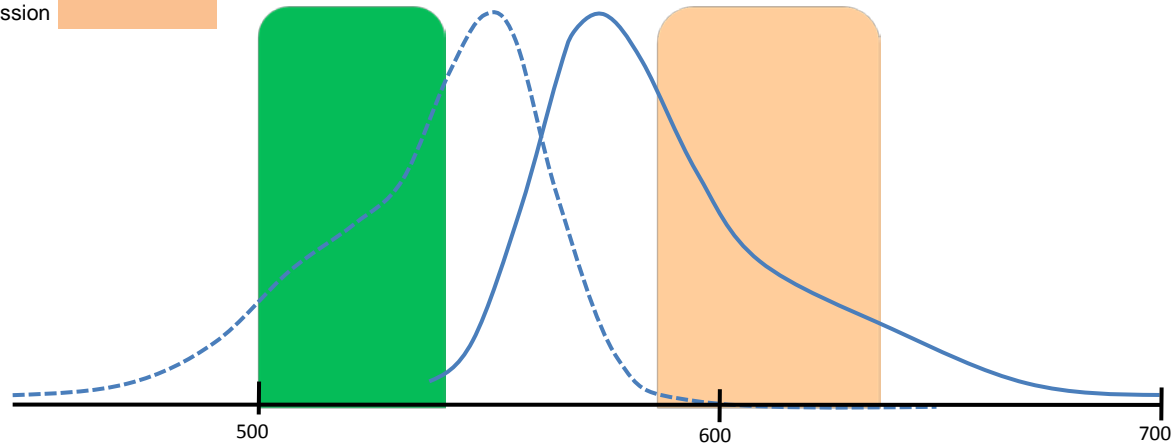


Uses: SYTOX® Orange is a membrane-impermeant nuclear stain that marks cells with compromised plasma membranes.

TAMRA

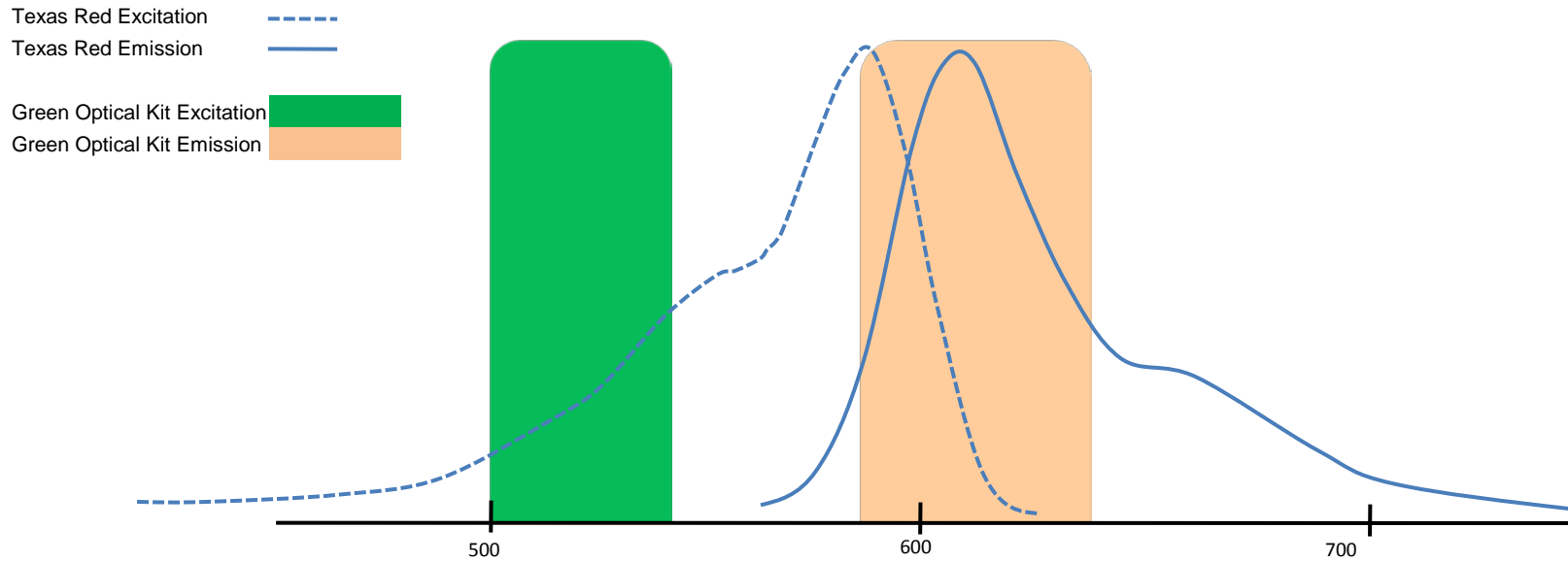
TAMRA Excitation 
TAMRA Emission 

Green Optical Kit Excitation 
Green Optical Kit Emission 





Uses: It is predominantly used for nucleotide labeling.



Texas Red

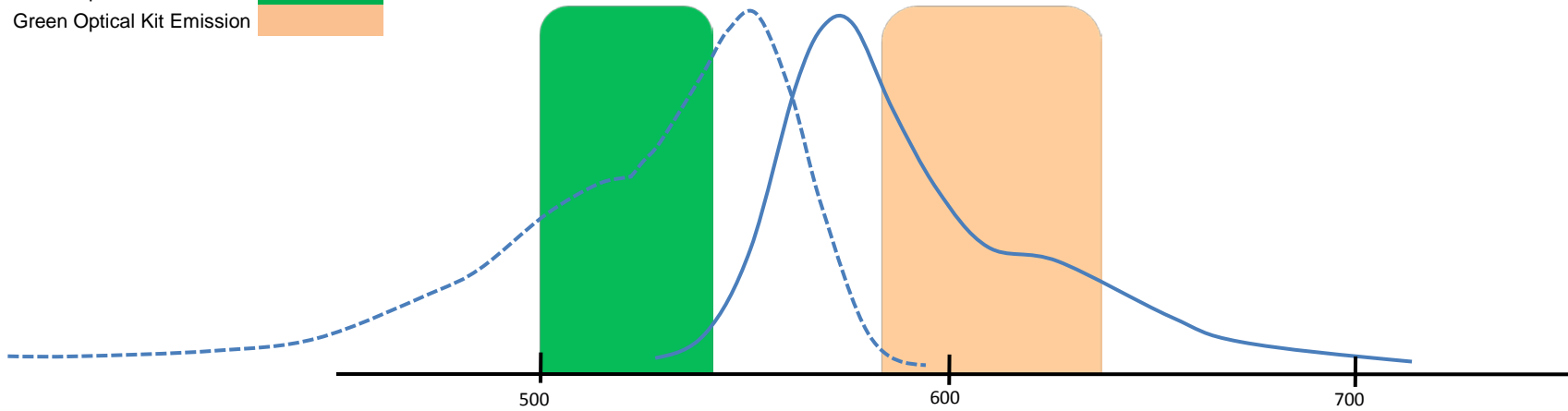


Uses: Can be conjugated to antibodies and other proteins

TRITC



TRITC Excitation 
TRITC Emission 


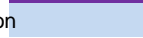
Green Optical Kit Excitation 
Green Optical Kit Emission 

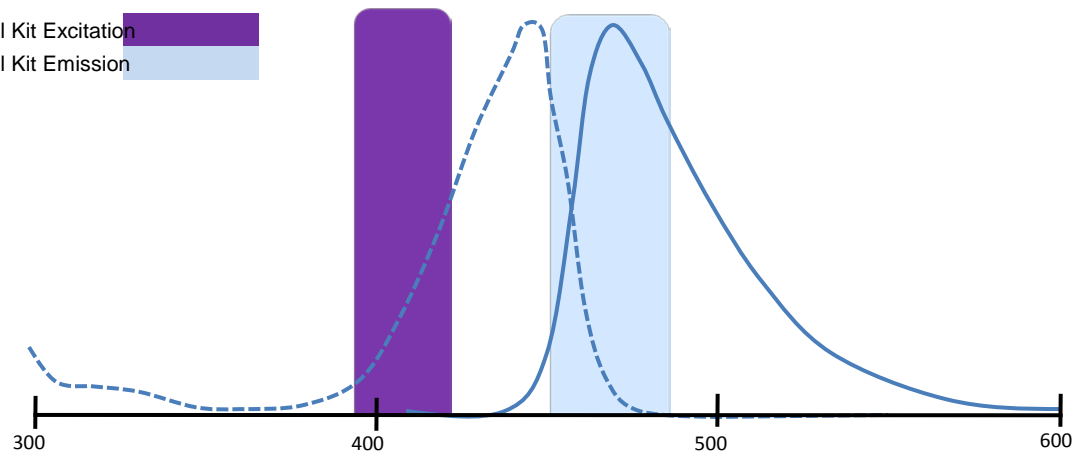


Uses: Can be conjugated to antibodies and other proteins

SYTOX Blue

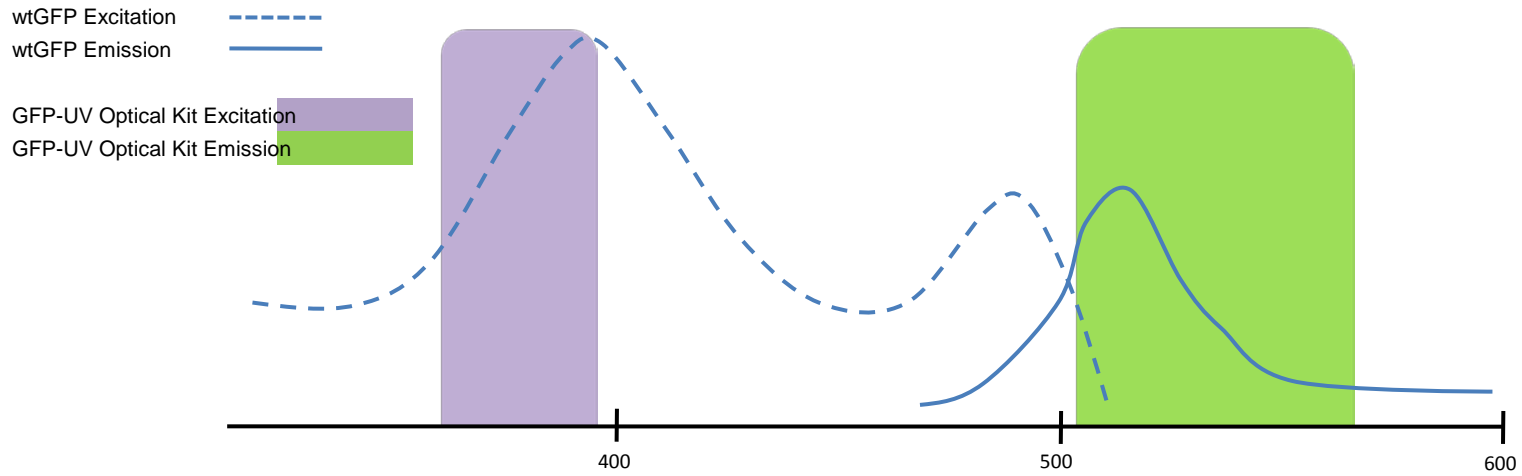
Sytox Blue Excitation 
Syttox Blue Emission 

Custom Optical Kit Excitation 
Custom Optical Kit Emission 



Uses: SYTOX® Blue dead cell stain is a high-affinity nucleic acid stain that is used for dead cell staining.

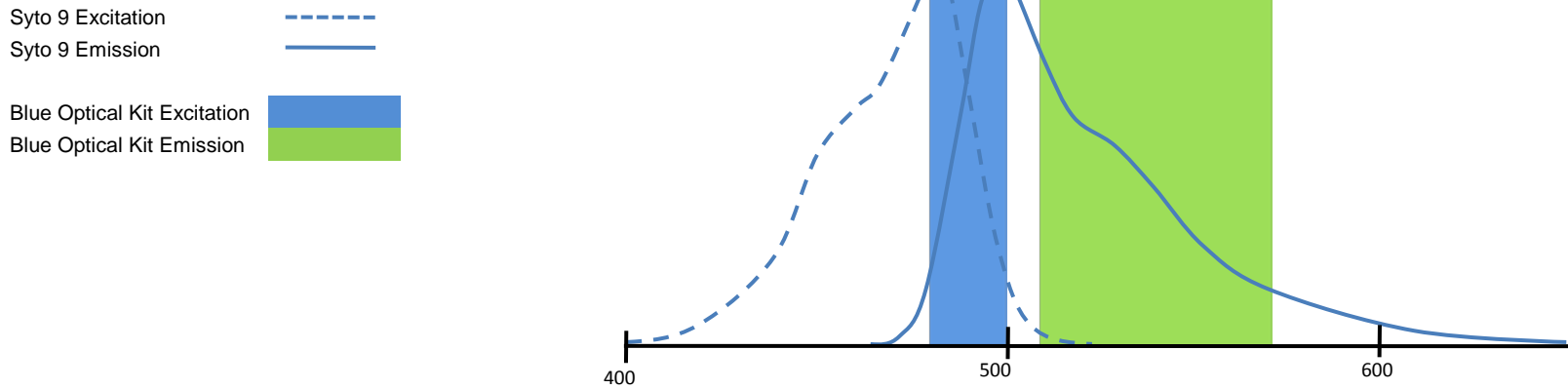
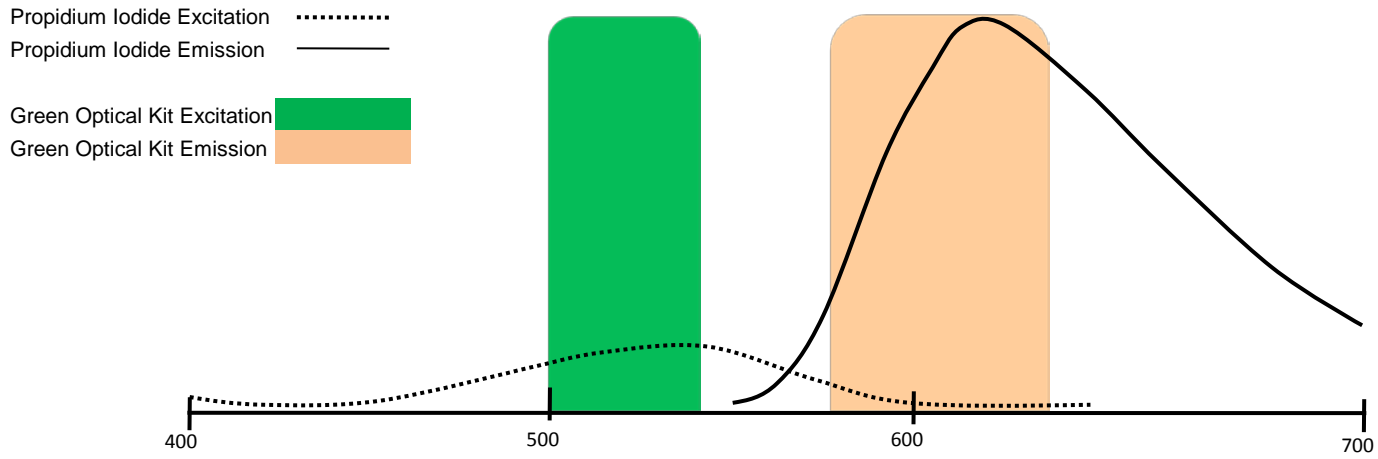
wtGFP



Uses: When the gene encoding for wtGFP is inserted into the host genome, the encoded protein enables both the tracking of tagged proteins and their expression levels.

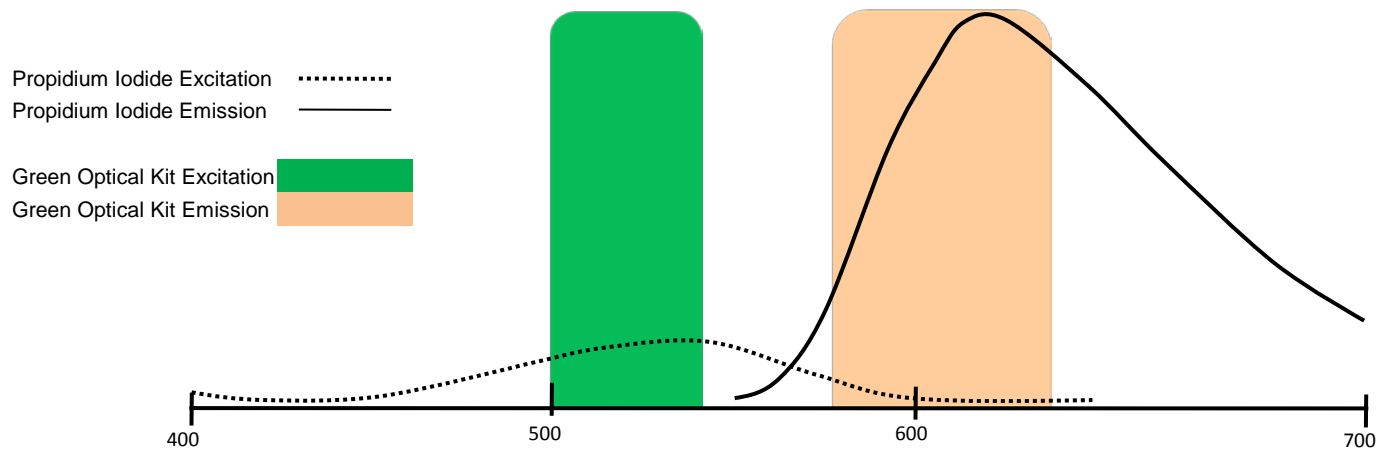
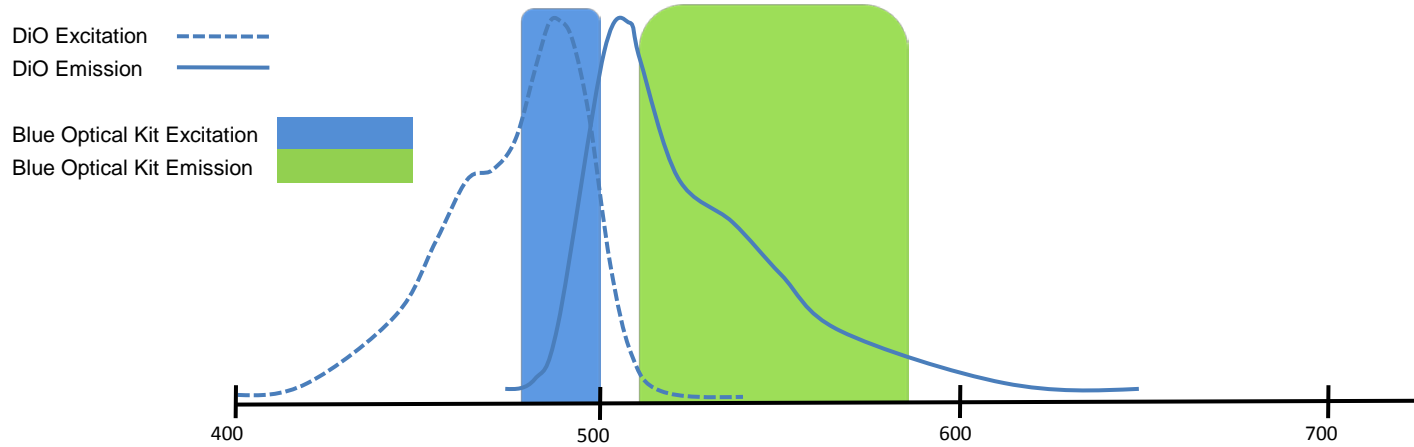
Propidium Iodide/Syto 9

LIVE/DEAD® BacLight™ Bacterial Viability Kits



DiO/Propidium Iodide

LIVE/DEAD® Cell-Mediated Cytotoxicity Kit (L7010)



Calcein/Ethidium homodimer-1

LIVE/DEAD® Viability/Cytotoxicity Kit *for mammalian cells

