BD Horizon Brilliant™ Violet Reagents

Features

- Six bright polymer dyes for the violet laser
- Excellent resolution of dim populations
- More color choices for multicolor panel design

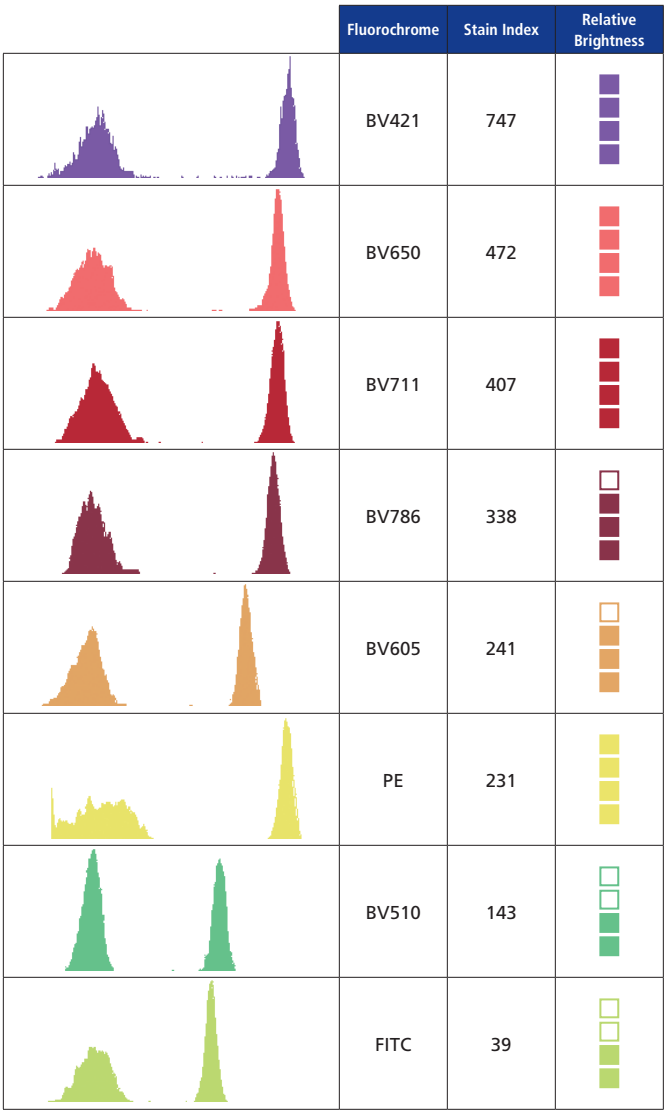

Figure 1. Lysed whole blood stained with various human CD4 reagents. Data shown is on lymphocytes. The BD Horizon Brilliant Violet dyes were excited by the violet laser, and PE and FITC were excited by the blue laser. Relative stain index is dependent on instrument configuration including lasers, filters, and laser power.

Visit **bdbiosciences.com/go/brilliant** to keep updated on our expanding portfolio.

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BD Horizon Brilliant™ Violet unique polymer dyes were developed from pioneering polymer dye technology acquired from Sirigen Ltd. that enables researchers to identify cell populations with lower receptor density than previously possible and resolve cell populations previously obscured.

Six bright dyes for the violet laser

The six Brilliant Violet polymer dyes come in two forms—a base polymer and a tandem polymer. These dyes are very bright and in many cases, provide unprecedented brightness for dyes excited by the violet laser (Figure 1). Brilliant Violet polymer dyes are available in a broad array of specificities including dim markers where the dyes offer strong benefits. Together these polymer dyes deliver exceptional choices for the violet laser for more flexible panel design.

Excellent population resolution

The brightness of the Brilliant Violet dyes provides excellent resolution of dim populations. These conjugates exhibit significantly improved resolution compared to typical violet excitable fluorochromes and in many cases, similar resolution to PE conjugates. The Brilliant Violet family of dyes provides more options to effectively resolve dim populations, leading to easier and more optimal panel design.

More choices for multicolor panel design

In addition to offering very bright dyes, the Brilliant Violet family adds more options for designing multicolor panels. The dyes enable up to six colors to be run on the violet laser, making large multicolor experiments more accessible. For smaller panels, a wider selection of fluorochromes makes it easier to control spillover by spreading markers over multiple lasers.

Convenient size options

Brilliant Violet polymer conjugates are available in multiple sizes to address a range of requirements from 25 tests for multicolor panel pilot-scale experiments to 100-test sizes needed for routine assays.

As with all BD mouse reagents, BD Horizon Brilliant Violet reagents are offered in mass sizes for optimal value and flexibility across different tissue types and strains.

Compatible with standard surface and intracellular staining protocols

Brilliant Violet polymer dyes are compatible with standard buffers used in surface and intracellular staining protocols, making the reagents easy to incorporate into current workflows. These Brilliant Violet polymer conjugates have been tested in multiple intracellular staining protocols, including BD Cytofix/Cytoperm™ Fixation/Permeabilization Solution, BD Phosflow™ Perm Buffer I, BD Phosflow™ Perm Buffer III, and BD Pharmingen™ Transcription Factor Buffer Set, with successful results. Buffer compatibility is also clone-dependent, so some reagents may not be compatible with all buffer systems.

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BD Horizon Brilliant™ Violet Reagents

BD Horizon™ BV421	
Type of Dye	Base polymer
Excitation Max	407 nm
Emission Max	421 nm
Filter	450/40
Relative Brightness	Brightest
Compatible Instruments	BD FACS™ brand flow cytometers equipped with a violet laser, including the BD LSRFortessa™ X-20, BD FACSVerse™, BD FACSCanto™ II, BD FACSAria™ III and Special Order BD FACSAria, BD FACSAria Fusion™, BD Influx™, and BD FACSJazz™.
Panel Design Considerations	This is one of the brightest fluorochromes offered by BD Biosciences. Due to its brightness, this dye should be reserved for the dimmest markers of the panel.

BD Horizon™ BV510	
Type of Dye	Base polymer
Excitation Max	405 nm
Emission Max	510 nm
Filter	525/50
Relative Brightness	Moderate
Compatible Instruments	BD FACS brand flow cytometers equipped with a violet laser, including the BD LSRFortessa X-20, BD FACSVerse, BD FACSCanto II, BD FACSAria III and Special Order BD FACSAria, BD FACSAria Fusion, BD Influx, and BD FACSJazz.
Panel Design Considerations	This dye is much brighter than BD Horizon™ V500 but will have more spillover into BD Horizon™ BV605 and BD Horizon™ BV650. It is ideal to use BD Horizon™ BV510 for dimmer markers and BD Horizon™ V500 for bright markers.

BD Horizon™ BV605	
Type of Dye	Tandem dye (BV421 + Cy™3.5)
Excitation Max	407 nm
Emission Max	605 nm
Filter	610/20
Relative Brightness	Bright
Compatible Instruments	BD FACS brand flow cytometers equipped with a violet laser and at least three photomultiplier tubes (PMTs), including the BD LSRFortessa X-20, BD FACSAria III and Special Order BD FACSAria, BD FACSAria Fusion, and BD Influx.
Panel Design Considerations	This dye is very bright and should be reserved for dimmer markers in the panel. Due to the excitation of the acceptor dye, there will be significant spillover into the PE and PE-CF594 channels when using this dye on an instrument with a yellow-green or green laser. There may also be moderate spillover into the BD Horizon™ BV650 detector.

BD Horizon™ BV650	
Type of Dye	Tandem dye (BV421 + DY-610)
Excitation Max	407 nm
Emission Max	650 nm
Filter	660/20
Relative Brightness	Brightest
Compatible Instruments	BD FACS brand flow cytometers equipped with a violet laser and at least three PMTs, including the BD LSRFortessa X-20, BD FACSAria III and Special Order BD FACSAria, BD FACSAria Fusion, and BD Influx.
Panel Design Considerations	This dye is very bright and should be reserved for the dimmer markers of the panel. Due to the excitation and emission characteristics of the acceptor dye, there will be moderate spillover into the APC and Alexa Fluor® 700 detectors. There will be moderate spillover into the BV711 detector.

BD Horizon™ BV711	
Type of Dye	Tandem dye (BV421 + DY-682)
Excitation Max	407 nm
Emission Max	711 nm
Filter	710/50
Relative Brightness	Brightest
Compatible Instruments	BD FACS brand flow cytometers equipped with a violet laser and at least three PMTs, including the BD LSRFortessa X-20, BD FACSAria III and Special Order BD FACSAria, BD FACSAria Fusion, and BD Influx.
Panel Design Considerations	This dye is very bright and should be reserved for the dimmer markers of the panel. Due to the spectral characteristics of the acceptor dye, there will be moderate spillover into the PerCP-Cy5.5 and Alexa Fluor® 700 channels. There will also be spillover into the BV786 detector.

BD Horizon™ BV786	
Type of Dye	Tandem dye (BV421 + DY-752)
Excitation Max	407 nm
Emission Max	786 nm
Filter	780/60
Relative Brightness	Bright
Compatible Instruments	BD FACS brand flow cytometers equipped with a violet laser and at least three PMTs, including the BD LSRFortessa X-20, BD FACSAria III and Special Order BD FACSAria, BD FACSAria Fusion, and BD Influx.
Panel Design Considerations	This dye is very bright and should be reserved for the dimmer markers in the panel. Due to its spectral characteristics, this dye has little to no cross-laser excitation, making it an ideal choice for multicolor panels.

BD cytometers are Class 1 laser products.

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DY is a trademark of Dyomics, Jena.

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