

BD Horizon V450 Reagents

Violet Laser Reagents

Features

Delivers improved performance on flow cytometers equipped with violet lasers

Available in a broad portfolio of reagents to maximize flexibility for multicolor panel design

Optimized to be compatible with other BD reagents used on BD FACS brand flow cytometers

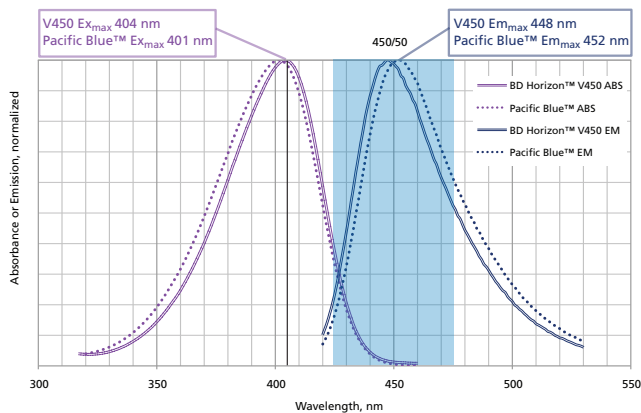


Figure 1. Spectral overlay comparison of BD Horizon V450 and Pacific Blue™

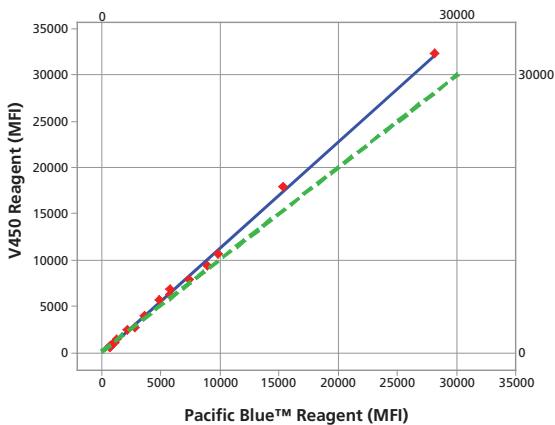


Figure 2: Comparison of fluorescence intensities of BD Horizon V450 and Pacific Blue™ reagents. Human peripheral blood cells were stained with 18 matched pairs of BD Horizon V450 and Pacific Blue™ reagents (eg, BD Horizon V450 labeled anti-human CD8 vs. Pacific Blue™ labeled anti-human CD8). The conjugates were F/P ratio matched and tested using whole blood and the lyse/wash method. The corresponding median fluorescence intensity (MFI) of the positive cells for each reagent pair was measured and plotted as shown. The green dashed line represents the theoretical MFI ratio (slope = 1.0) for reagents of equivalent brightness. The blue line shows the linear regression (slope = 1.15) of the 18 reagent pairs. The data shows that while there might be variation due to individual clones (see Table 1), on average the BD Horizon V450 reagents are 15% brighter than the corresponding Pacific Blue™ reagents.

BD Horizon™ V450 reagents are high-quality antibody conjugates designed to deliver exceptional performance on BD FACST™ brand flow cytometers equipped with violet lasers. The first in a series of new fluorochromes from BD Biosciences, these reagents are engineered to deliver high sensitivity and consistent results.

A broad portfolio of BD Horizon V450 conjugates is available, maximizing choice and flexibility for multicolor panel design. Offering exceptional performance and compatibility, BD Horizon V450 reagents, together with online tools and resources from BD Biosciences, make the power of multicolor flow cytometry more accessible to researchers than ever before.

Optimized for the violet laser

BD Horizon V450 reagents are engineered for use with BD FACS brand flow cytometers equipped with violet lasers, including BD FACSCanto™, BD FACSAria™, and the BD™ LSR cell analyzer family line. When used with these instruments, BD Horizon V450 reagents demonstrate improved spectral characteristics as compared to Pacific Blue™ reagents (Figure 1), with a maximum absorption of 404 nm and an emission peak of 448 nm. Additionally, many BD Horizon V450 reagents exhibit improved performance compared to Pacific Blue™ reagents as measured by median fluorescence intensity (MFI) and normalized signal to noise (stain index) (Figure 2, Table 1).

Wide portfolio of conjugates, multiple sizes

BD Horizon V450 reagents are available in a broad array of clones. Multiple sizes address a range of requirements from small test sizes for multicolor panel design to 120-test sizes needed for high-throughput experiments. Bulk sizes and special packaging options are also available.

Tools to optimize setup, selection, and performance

Multicolor flow cytometry enables simultaneous analysis of multiple parameters in a single experiment and can quickly deliver a wealth of information about cellular composition and function.

To help advance the use of multicolor flow cytometry, BD Biosciences offers a growing library of tools and resources relevant to both experienced researchers and those new to multicolor panel design. In addition to these online resources, BD Biosciences offers one-on-one technical application support as part of our comprehensive customer services. Every day around the world, BD flow cytometry experts help customers on the phone and on-site to address a range of multicolor questions from panel design to troubleshooting.

Visit bdbiosciences.com/colors for more information.



BD Horizon V450 Reagents

	CD11c (B-Ly6)*	CD11c (B-Ly6)**	CD19 (HIB19)	CD8 (RPA-T8)	IFN- γ (B27.1)	CD3 (SP34-2)	CD3 (UCHT1)	CD45 (HI30)
BD Horizon V450	4.0	12.5	20.8	28.5	29.6	42.7	47.3	255.0
Pacific Blue™	4.2	12.3	18.8	24.6	25.7	39.0	44.8	228.0
%DIFF	-5%	2%	11%	16%	15%	9%	6%	12%

* Tested on granulocytes ** Tested on monocytes

Table 1: Stain index comparison between BD Horizon V450 and Pacific Blue™ reagents across several antibody clones.

F/P matched conjugates of both BD Horizon V450 and Pacific Blue™ were tested on whole blood using the lyse/wash method with BD PharmLyse™ lysing buffer (Cat. No. 555899) and run on a BD LSR II system equipped with a violet laser and a 450/50 filter. Comparative stain indices between BD Horizon V450 and Pacific Blue™ were calculated to assess relative brightness of the two fluorophores. The comparison revealed that BD Horizon V450 is generally brighter than Pacific Blue™ across the tested specificities.

BD Horizon V450 RUO (GMP) Reagents

Description	React.	Clone	Isotype	Size	Cat. No.
CD2	Hu	S5.2	Ms IgG _{2a} , κ	100 tests	644485
CD5	Hu	L17F12	Ms IgG _{2a} , κ	100 tests	644487
CD7	Hu	M-T701	Ms IgG ₁ , κ	100 tests	642916
CD15	Hu	MMA	Ms IgM ₁ , κ	100 tests	642917
CD16	Hu	3G8	Ms IgG ₁ , κ	100 tests	644489
CD19	Hu	SJ25C1	Ms IgG ₁ , κ	100 tests	644491
CD20	Hu	L27	Ms IgG ₁ , κ	100 tests	642274
CD38	Hu	HB7	Ms IgG ₁ , κ	100 tests	646851
CD45	Hu	2D1	Ms IgG ₁ , κ	100 tests	642275
FMC7	Hu	FMC7	Ms IgM, κ	100 tests	644493
HLA-DR	Hu	L243	Ms IgG _{2a} , κ	100 tests	642276
IgG ₁	Hu	X40	Ms IgG ₁ , κ	100 tests	642268

BD Horizon V450 RUO Reagents

Description	React.	Clone	Isotype	Size	Cat. No.
CD3	Hu	UCHT1	Ms IgG ₁ , κ	30 tests [†]	560366
				120 tests	560365
CD3 (NHP)	Hu, NHP	SP34-2	Ms IgG ₁ , λ	30 tests [†]	560352
				120 tests	560351
CD4	Hu	RPA-T4	Ms IgG ₁ , κ	30 tests [†]	560346
				120 tests	560345
CD8	Hu	RPA-T8	Ms IgG ₁ , κ	30 tests [†]	560348
				120 tests	560347
CD11b	Hu	ICRF44	Ms IgG ₁ , κ	30 tests [†]	560481
				120 tests	560480
CD11c	Hu	B-ly6	Ms IgG ₁ , κ	30 tests [†]	560370
				120 tests	560369
CD14	Hu	M ϕ P9	Ms IgG _{2b} , κ	30 tests [†]	560350
				120 tests	560349
CD16	Hu	3G8	Ms IgG ₁ , κ	30 tests [†]	560475
				120 tests	560474
CD19	Hu	HIB19	Ms IgG ₁ , κ	30 tests [†]	560354
				120 tests	560353
CD25	Hu	M-A251	Ms IgG ₁ , κ	30 tests [†]	560356
				120 tests	560355
CD27	Hu	MT-271	Ms IgG ₁ , κ	30 tests [†]	560458
				120 tests	560448
CD45	Hu	HI30	Ms IgG ₁ , κ	30 tests [†]	560368
				120 tests	560367
CD45RA	Hu	HI100	Ms IgG _{2b} , κ	30 tests [†]	560363
				120 tests	560362
CD56	Hu	B159	Ms IgG ₁ , κ	30 tests [†]	560361
				120 tests	560360
CD62L	Hu	DREG-56	Ms IgG ₁ , κ	30 tests [†]	560441
				120 tests	560440
CD80	Hu	L307.4	Ms IgG ₁ , κ	30 tests [†]	560444
				120 tests	560442
CD86	Hu	2331(FUN-1)	Ms IgG ₁ , κ	30 tests [†]	560359
				120 tests	560357
Bcl-2	Hu	BCL-2/100	Ms IgG ₁	50 tests	560637
FoxP3	Hu	259D/C7	Ms IgG ₁	30 tests [†]	560460
				120 tests	560459
IFN- γ	Hu	B27	Ms IgG ₁ , κ	30 tests [†]	560372
				120 tests	560371
IL-17A	Hu	N49-653	Ms IgG ₁ , κ	50 tests	560610

[†] Trial sizes available for a limited time

BD Horizon V450 RUO Reagents (continued)

Description	React.	Clone	Isotype	Size	Cat. No.
CD4	Ms	RM4-5	Rat IgG _{2a} , κ	25 μ g [†]	560470
				0.1 mg	560468
CD8a	Ms	53-6.7	Rat IgG _{2a} , κ	25 μ g [†]	560471
				0.1 mg	560469
CD11b	Ms	MI/70	Rat IgG _{2b} , κ	25 μ g [†]	560456
				0.1 mg	560455
CD16/CD32	Ms	2.4G2	Rat IgG _{2b} , κ	50 μ g	560539
CD19	Ms	1D3	Rat IgG _{2a} , κ	25 μ g [†]	560376
				0.1 mg	560375
CD44	Ms	IM7	Rat IgG _{2b} , κ	25 μ g [†]	560452
				0.1 mg	560451
CD45	Ms	30-F11	Rat IgG _{2b} , κ	50 μ g	560501
CD45.1	Ms	A20	Ms IgG _{2a} , κ	50 μ g	560520
CD45R	Ms	RA3-6B2	Rat IgG _{2a} , κ	25 μ g [†]	560473
				0.1 mg	560472
CD86	Ms	GL1	Rat IgG _{2a} , κ	25 μ g [†]	560450
				0.1 mg	560449
CD117	Ms	2B8	Rat IgG _{2b} , κ	50 μ g	560558
IgM	Ms	R6-60.2	Rat IgG _{2a} , κ	50 μ g	560575
IL-2	Ms	JES6-5H4	Rat IgG _{2b} , κ	50 μ g	560546
IL-17A	Ms	TC11-18H10	Rat IgG ₁ , κ	50 μ g	560522
LY-6G	Ms	1A8	Rat IgG _{2a} , κ	50 μ g	560603
LY-6G and LY-6C (Gr-1)	Ms	RB6-8C5	Rat IgG _{2b} , κ	25 μ g [†]	560454
				0.1 mg	560453
Annexin V	-	-	-	50 tests	560506
IgG ₁ , κ	-	MOPC-21	Ms IgG ₁ , κ	0.1 mg	560373
IgG _{2b} , κ	-	A95-1	Rat IgG _{2b} , κ	0.1 mg	560457
IgG _{2b} , κ	-	27-35	Ms IgG _{2b} , κ	0.1 mg	560374
IgG _{2a} , κ	-	R35-95	Rat IgG _{2a} , κ	0.1 mg	560377
IgG _{2a} , κ	-	G155-178	Ms IgG _{2a} , κ	0.1 mg	560550
IgM, κ	-	R4-22	Rat IgM, κ	0.1 mg	560574
IgG ₁ , κ	-	R3-34	Rat IgG ₁ , κ	0.1 mg	560535



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