

BD Horizon™ APC-R700 Reagents

Red laser reagents

Features

- Maximize flexibility with a very bright choice for the red laser
- Significantly brighter than Alexa Fluor® 700
- Provide even more options for panel design with custom reagents

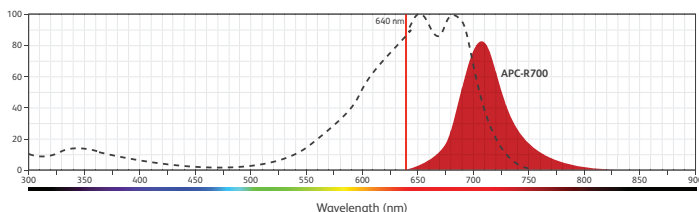


Figure 1. Absorption and emission spectra: Ex Max: 652 nm; Em Max: 704 nm

Specificity (Clone)	Resolution (Stain Index)			APC-R700 Brightness Relative to	
	APC-R700	APC	Alexa Fluor® 700	APC	Alexa Fluor® 700
Hu CD19 (HIB19)	219	91	23	2.4	9.5
Hu HLA-DR (G46-6)	199	115	44	1.7	4.5
Hu CD38 (HIT2)	10	10	4	1.0	2.5
Ms CD11b (m1/70)	34	15	4	2.3	8.5
Ms CD86 (GL1)	80	68	28	1.2	2.9

Table 1. Reagents of the same clone in various formats were tested side by side to evaluate the stain index.

BD Horizon APC-R700 expands options for dim marker identification in multicolor panels

BD Biosciences continues to expand the options for multicolor flow cytometry through the development of a new bright dye for the red laser. BD Horizon™ APC-R700 reagents are significantly brighter than Alexa Fluor® 700 reagents, offering an additional bright option for resolving dim markers (Table 1).

Very bright dye for the red laser

BD Horizon APC-R700 is a tandem dye developed exclusively by BD Biosciences that combines APC with R700, a proprietary organic dye, for multicolor flow cytometry. With a maximum excitation of 652 nm and an emission peak at 704 nm (Figure 1), BD Horizon APC-R700 can be used on flow cytometers equipped with a red laser and detected with Alexa Fluor®700-like filters (e.g., 730/45). The brightness of this dye provides excellent separation of positive and negative populations, important for resolving dim markers (Figure 2).

A stable and consistent tandem

BD Horizon APC-R700 has been optimized to exhibit lot-to-lot consistency. Across lots and specificities, it demonstrates consistent spillover into the APC and APC-Cy™7/H7 channels, improving sensitivity and reproducibility of results (Table 2).



Additionally, the dye is compatible with standard buffers used in surface and intracellular staining protocols. These reagents also demonstrate compatibility in both EDTA and heparin blood collection tubes. BD Horizon APC-R700 is stable in the presence of paraformaldehyde-based fixatives for up to 48 hours, providing flexibility for a variety of lab workflows (Figure 3).

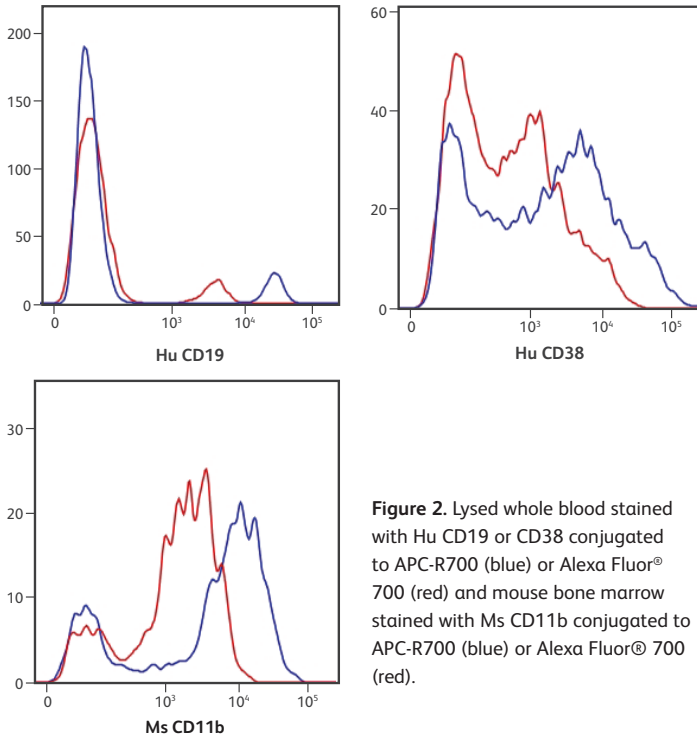


Figure 2. Lysed whole blood stained with Hu CD19 or CD38 conjugated to APC-R700 (blue) or Alexa Fluor® 700 (red) and mouse bone marrow stained with Ms CD11b conjugated to APC-R700 (blue) or Alexa Fluor® 700 (red).

Specificity (Clone)	Spillover (% SOV in APC)	Spillover (% SOV in APC-Cy7/H7)
Hu CD19 (HIB19)	Lot 1: 8.7 Lot 2: 8.2	Lot 1: 15.4 Lot 2: 15.6
Hu HLA-DR (G46-6)	8.4	15.7
Hu CD38 (HIT2)	Lot 1: 8.4 Lot 2: 7.9	Lot 1: 15.4 Lot 2: 15.6
Ms CD11b (m1/70)	7.7	15.7
Ms CD86 (GL1)	7.5	15.7

Table 2. Spillover values generated using BD™ CompBead particles. APC-R700 spillover values are consistent into adjacent channels across different lots and specificities.

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More flexibility for multicolor design

New possibilities for comprehensive multicolor panels are now available through the use of BD Horizon APC-R700. By offering an additional bright dye for the red laser, BD Horizon APC-R700 provides more flexibility for panel design and more optimal resolution of dim markers.

Time (h)	MFI	% SOV Into	
		APC	APC-Cy7
0	64,957	9	19
24	65,280	9	19
48	63,208	9	19

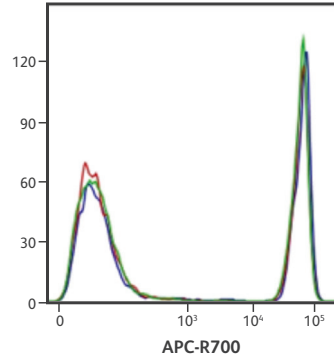


Figure 3. Lysed whole blood stained with Hu CD4 APC-R700, fixed with BD Cytotfix™ reagent and stored at 4°C in the dark for up to 48 hours. Top: MFI and spillover values are consistent over a span of 48 hours. Right: Corresponding figure shows Hu CD4 APC-R700 staining at zero hours (red line), 24 hours (blue line) and 48 hours (green line).

A selection of available markers

Description	React.	Clone	Isotype	Size	Cat. no.
CD19	Hu	HIB19	Mouse IgG ₁ , κ	25 tests	564978
				100 tests	564977
CD38	Hu	HIT2	Mouse IgG ₁ , κ	25 tests	564980
				100 tests	564979
HLA-DR	Hu	G46-6	Mouse IgG _{2a} , κ	25 tests	565128
				100 tests	565127
CD25	Hu	2A3	Mouse IgG ₁ , κ	25 tests	565107
				100 tests	565106
CD80	Hu	L307.4	Mouse IgG ₁ , κ	50 tests	565157
CD8a	Ms	53-6.7	Rat IgG _{2a} , κ	0.1 mg	564983
CD11b	Ms	M1/70	Rat IgG _{2b} , κ	0.1 mg	564985
CD25	Ms	PC61	Rat IgG _{2a} , λ	25 µg	565135
				0.1 mg	565134

