



Managing background seen in the presence of anti-PEG antibodies in human whole blood

Dear Valued Customer,

Beginning in early 2021, we began to observe an increase in the number of aberrant signals detected during flow cytometric analysis of whole blood from some human donors. This phenomenon appears to be donor specific and is not present in all donors. It is only observed when using **fluorochromes that contain polyethylene glycol (PEG)** in their structure. We believe that the aberrant signal is related to the presence of **anti-PEG antibodies in whole blood** and that the **COVID-19 vaccination** has increased the frequency of donors whose serum contains these antibodies.

A list of BD fluorochromes that may be affected is included at the end of this communication (see Table 1). Should your whole blood assay incorporate any of these fluorochromes, we recommend performing the assay in **BD Horizon™ Brilliant Stain Buffer** (see Table 2), which will **mitigate the background caused by the presence of anti-PEG antibodies** in these donors (see Figures 1 and 2). Alternatively, if your assay is amenable to staining after serum removal, pre-lysing erythrocytes and/or washing off serum can also reduce this background staining. This background is not observed when using **PBMC preparations**.

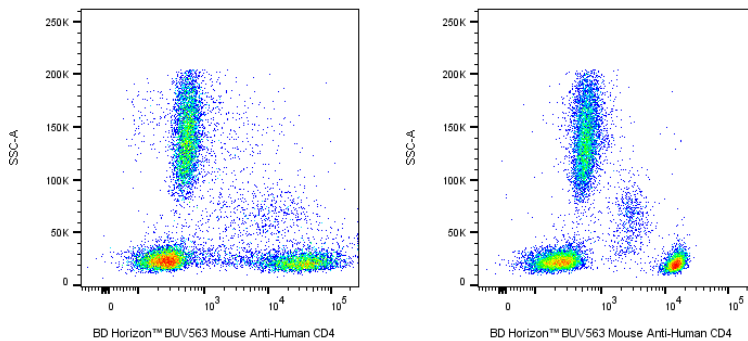


Figure 1. Human whole blood was stained with BD Horizon™ BUV563 Mouse Anti-Human CD4 Reagent without (left) or with (right) BD Horizon™ Brilliant Stain Buffer.

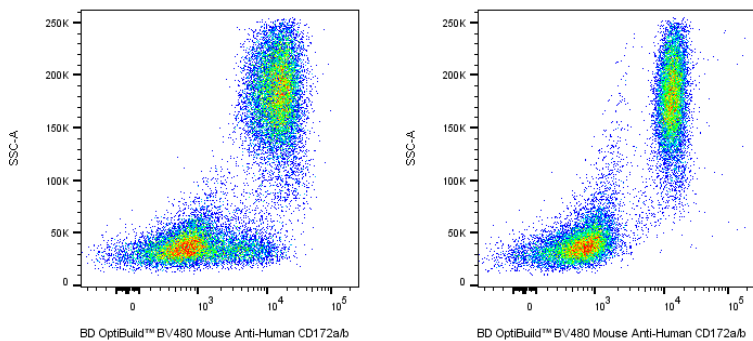


Figure 2. Human whole blood was stained with BD OptiBuild™ BV480 Mouse Anti-Human CD172a/b Reagent either without (left) or with (right) BD Horizon™ Brilliant Stain Buffer.

Table 1. Fluorochromes containing PEG

BD Horizon Brilliant™ Ultraviolet (BUV), BD Horizon Brilliant Violet™ (BV), BD Horizon Brilliant™ Blue (BB) and BD Horizon™ Red (R)

Laser	Fluorochromes
UV	BUV395, BUV496, BUV563, BUV615, BUV661, BUV737 and BUV805
Violet	BV421, BV480, BV510, BV605, BV650, BV711, BV750 and BV786
Blue	BB515 and BB70
Red	R718

Table 2. Buffers

Catalog number	Buffer name	Size
563794	BD Horizon™ Brilliant Stain Buffer	100 Tests
566349	BD Horizon™ Brilliant Stain Buffer	1,000 Tests
566385	BD Horizon™ Brilliant Stain Buffer Plus	1,000 Tests
659611	BD Horizon™ Brilliant Stain Buffer	2.5 mL

Should you have any additional questions regarding this communication, please do not hesitate to contact your local BD technical application specialist or email: ResearchApplications@bd.com.

Sincerely,

BD Biosciences Team

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

BD, the BD Logo, Horizon, Horizon Brilliant, Horizon Brilliant Violet and OptiBuild are trademarks of Becton, Dickinson and Company or its affiliates. All other trademarks are the property of their respective owners. © 2021 BD. All rights reserved. BD-45054 (v1.0) 1021