

## Technical Data Sheet

**BUV737 Mouse Anti-Human CD86****Product Information**

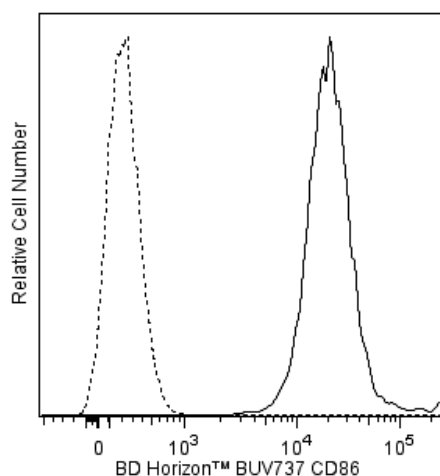
<b>Material Number:</b>	<b>564428</b>
<b>Alternate Name:</b>	B7.2; B7-2; B-lymphocyte activation antigen B7-2; B70; BU63; CD28LG2; LAB72
<b>Size:</b>	100 Tests
<b>Vol. per Test:</b>	5 µl
<b>Clone:</b>	2331 (FUN-1)
<b>Immunogen:</b>	Human HBL-1 Cell Line
<b>Isotype:</b>	Mouse (BALB/c) IgG1, κ
<b>Reactivity:</b>	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon
<b>Workshop:</b>	V B046, BP126
<b>Storage Buffer:</b>	Aqueous buffered solution containing ≤0.09% sodium azide.

**Description**

The 2331 (FUN-1) monoclonal antibody specifically recognizes a 75 kDa transmembrane cell surface protein, CD86 (B70/B7-2), expressed primarily on monocytes, dendritic cells and activated B cells. Competitive binding assays demonstrate that, while both 2331 (FUN-1) and IT2.2 (Anti-CD86) antibodies specifically recognize the same molecule, they react with different epitopes. CD86 is a ligand for CD28 and CTLA-4 and plays an important role in costimulation of T cells in primary immune response. The 2331 (FUN-1) antibody blocks the costimulatory activity of CD86 when tested in functional studies.

The antibody was conjugated to BD Horizon™ BUV737 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome of BD Horizon BUV395 with an Ex Max of 348-nm and an acceptor dye with an Em Max at 737-nm. BD Horizon Brilliant BUV737 can be excited by the ultraviolet laser (355 nm) and detected with a 740/35 filter. Due to the excitation of the acceptor dye by other laser lines, there may be significant spillover into channels detecting Alexa Fluor® 700-like dyes (e.g., 712/20-nm filter).

Due to spectral differences between labeled cells and beads, using BD™ CompBeads can result in incorrect spillover values when used with BD Horizon BUV737 reagents. Therefore, the use of BD CompBeads or BD CompBeads Plus to determine spillover values for these reagents is not recommended. Different BUV737 reagents (e.g., CD4 vs. CD45) can have slightly different fluorescence spillover therefore, it may also be necessary to use clone specific compensation controls when using these reagents.



**Flow cytometric analysis of CD86 expression on Daudi cells.** Human Daudi B lymphoma cells (ATCC CCL-213) were stained with either BD Horizon™ BUV737 Mouse IgG1, κ Isotype Control (Cat. No. 564299; dashed line histogram) or BD Horizon BUV737 Mouse Anti-Human CD86 antibody (Cat. No. 564428; solid line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.

**Preparation and Storage**

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ BUV737 under optimum conditions, and unconjugated antibody and free BD Horizon BUV737 were removed.

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## Application Notes

### Application

Flow cytometry

Routinely Tested

### Recommended Assay Procedure:

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD Optibuild Brilliant reagents) are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

### Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
564299	BUV737 Mouse IgG1, $\kappa$ Isotype Control	50 $\mu$ g	X40
563794	Brilliant Stain Buffer	100 Tests	(none)
566349	Brilliant Stain Buffer	1000 Tests	(none)
566385	Brilliant Stain Buffer Plus	1000 Tests	(none)

### Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100- $\mu$ l experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
7. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
8. BD Horizon Brilliant Ultraviolet 737 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,575,303; 8,354,239.
9. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.

### References

Engel P, Wagner N, Tedder TF. CD86 Workshop Report. In: Schlossman SF, Stuart F, Schlossman .. et al., ed. *Leucocyte typing V : white cell differentiation antigens : proceedings of the fifth international workshop and conference held in Boston, USA, 3-7 November, 1993*. Oxford: Oxford University Press; 1995:703-705. (Clone-specific: Blocking, Flow cytometry, Immunoprecipitation)

Engel P, Gribben JG, Freeman GJ, et al. The B7-2 (B70) costimulatory molecule expressed by monocytes and activated B lymphocytes is the CD86 differentiation antigen. *Blood*. 1994; 84(5):1402-1407. (Clone-specific: Blocking, Enhancement, Flow cytometry, Functional assay, Inhibition)

Nozawa Y, Wachi E, Tominaga K, Abe M, Wakasa H. A novel monoclonal antibody (FUN-1) identifies an activation antigen in cells of the B-cell lineage and Reed-Sternberg cells. *J Pathol*. 1993; 169(3):309-315. (Immunogen: Flow cytometry, Fluorescence microscopy, Immunofluorescence, Immunohistochemistry, Immunoprecipitation)

Nozawa Y, Wakasa H, Abe M. Production and usefulness of monoclonal antibodies against B cells. *Fukushima J Med Sci*. 1999; 45(1):1-11. (Clone-specific)

Nozawa Y, Abe M, Wakasa H. Three mAb, FUN-1, FB1, and FB21, that recognize B-cell antigens in frozen or paraffin-embedded tissue sections. In: Schlossman SF, Stuart F, Schlossman .. et al., ed. *Leucocyte typing V : white cell differentiation antigens : proceedings of the fifth international workshop and conference held in Boston, USA, 3-7 November, 1993*. Oxford: Oxford University Press; 1995:705-706. (Clone-specific: Immunohistochemistry)