

## Technical Data Sheet

**BUV395 Mouse Anti-Human LAIR-1 (CD305)**

## Product Information

Material Number:	744563
Size:	50 µg
Clone:	DX26
Alternative Name:	CD305; LAIR1; hLAIR1; Leukocyte-associated Ig-like receptor 1
Reactivity:	Human (Tested in Development)
Isotype:	Mouse BALB/c IgG1, κ
Immunogen:	Human NK Cell Clone
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

**Description**

The DX26 monoclonal antibody specifically binds to Leukocyte-associated immunoglobulin-like receptor 1 (LAIR-1/hLAIR1/Leukocyte-associated Ig-like receptor 1) that is encoded by LAIR1, and also known as, CD305. LAIR-1 is a ~32 kDa type I transmembrane glycoprotein with a single immunoglobulin-like domain and a cytoplasmic tail containing two immune receptor tyrosine-based inhibitory (ITIM) motifs. LAIR-1 is expressed on T cells, B cells, NK cells, monocytes, and dendritic cells. LAIR-1 recruits SHP-1 and SHP-2 tyrosine phosphatases upon activation. Crosslinking of the LAIR-1 expressed on T cells or NK cells can result in strong inhibition of cell-mediated cytotoxicity. Although it is structurally related to human killer cell inhibitory receptors, LAIR-1 does not appear to recognize MHC class I molecules and thus represents a novel MHC class I-independent mechanism of NK cell regulation.

The antibody was conjugated to BD Horizon™ BUV395 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye has been exclusively developed by BD Biosciences to have minimal spillover into other detectors, making it an optimal choice for multicolor flow cytometry. With an Ex Max at 348 nm and an Em Max at 395 nm, BD Horizon BUV395 can be excited with a 355 nm laser and detected with a 379/28 filter.

**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 BUV395 under optimal conditions that minimize unconjugated dye and antibody.

**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).

**Suggested Companion Products**

Catalog Number	Name	Size	Clone
349202	Lysing Solution 10X Concentrate	100 NA	
564219	Human BD Fc Block™	50 mg	
554656	Stain Buffer (FBS)	500 mL	
554657	Stain Buffer (BSA)	500 mL	
563794	Brilliant Stain Buffer	100 Tests	
555899	Lysing Buffer	100 mL	
563547	BUV395 Mouse IgG1, κ Isotype Control	50 µg	X40

## Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. 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.
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. Please refer to [www.bdbiosciences.com/us/s/resources](http://www.bdbiosciences.com/us/s/resources) for technical protocols.
8. 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.
9. BD Horizon Brilliant Ultraviolet 395 is covered by one or more of the following US patents: 8,158,444; 8,575,303; 8,354,239.

## References

Meyaard L, Adema GJ, Chang C, et al. LAIR-1, a novel inhibitory receptor expressed on human mononuclear leukocytes. *Immunity*. 1997; 7(2):283-290.

Poggi A, Tomasello E, Ferrero E, Zocchi MR, Moretta L. p40/LAIR-1 regulates the differentiation of peripheral blood precursors to dendritic cells induced by granulocyte-monocyte colony-stimulating factor. *Eur J Immunol*. 1998; 28(7):2086-2091.

Xu M, Zhao R, Zhao ZJ. Identification and characterization of leukocyte-associated Ig-like receptor-1 as a major anchor protein of tyrosine phosphatase SHP-1 in hematopoietic cells. *J Biol Chem*. 2000; 275(23):17440-17446.

## BD Biosciences

[bdbiosciences.com](http://bdbiosciences.com)

United States  
877.232.8995

Canada  
888.268.5430

Europe  
32.53.720.550

Japan  
0120.8555.90

Asia Pacific  
65.6861.0633

Latin America/Caribbean  
0800.771.7157



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