Technical Data Sheet

BUV661 Mouse Anti-Human LAIR-1 (CD305)

Product Information

Material Number:	750754
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™ BUV661 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 661-nm. BD Horizon Brilliant BUV661 can be excited by the ultraviolet laser (355 nm) and detected with a 670/25 filter and a 630 nm LP. Due to cross laser excitation of this dye, there may be significant spillover into channels detecting APC-like emissions (eg, 670/25-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 BUV661 reagents. Therefore, the use of BD CompBeads or BD CompBeads Plus to determine spillover values for these reagents is not recommended. Different BUV661 reagents (eg, 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.

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 BUV661 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
554656	Stain Buffer (FBS)	500 mL	
554657	Stain Buffer (BSA)	500 mL	
563794	Brilliant Stain Buffer	100 Tests	

555899	Lysing Buffer	100 mL	
612966	BUV661 Mouse IgG1, κ Isotype Control	50 µg	X40
349202	Lysing Solution 10X Concentrate	100 NA	
564219	Human BD Fc Block™	50 mg	

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.
7. Please refer to 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 661 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.

References

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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. (Biology: Flow cytometry).
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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. (Biology: Flow cytometry).

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