

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	LAIR-1, Human, clone NKTA255		
<b>Catalog number</b>	HM2364-20UG		
<b>Lot number</b>	-	<b>Expiry date</b>	-
<b>Volume</b>	200 µl	<b>Amount</b>	20 µg
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA	<b>Concentration</b>	100 µg/ml
<b>Host Species</b>	Mouse IgG1	<b>Conjugate</b>	None
<b>Endotoxin</b>	<24 EU/mg	<b>Purification</b>	Protein G
<b>Storage</b>	4°C		

**Application notes**

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #				2	1			
Yes				•	•	•	•	•
No								
N.D.	•	•	•					

*N.D. = Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot*

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- IA: HM2364 can be used as both capture and detection antibody.
- W: A non-reduced and reduced sample treatment and SDS-Page was used. The band size is ~31 kDa.

**General Information**

<b>Description</b>	The monoclonal antibody clone NKTA255 recognizes human leukocyte-associated immunoglobulin-like receptor-1 (LAIR-1). The LAIR family consist of at least two members; LAIR-1 (CD305) and LAIR-2 (CD306). To date, several splice variants of LAIR-1 have been identified. LAIR-1 is an inhibitory receptor expressed on most immune cells, like NK cells, T- & B-cells, monocytes, DCs, megakaryocytes, eosinophils, basophils, and mast cells. Especially the expression on pDCs is high. The main ligand of LAIR proteins is collagen. LAIR-1 is a transmembrane receptor with a single extracellular Ig-like domain, a transmembrane region and a cytoplasmic tail. This tail consist of two immunoreceptor tyrosine-based inhibition motif (ITIM) domains, which are responsible for its immunomodulating action. After cross-linking, the tyrosines in the ITIMs become phosphorylated which is required for inhibition of cellular activation. By shedding a soluble variant of the protein arises. sLAIR-1 can be found in healthy individuals and can be used as a marker of lymphocyte activation. sLAIR-1 has been found among others in serum, urine, amniotic fluid, and synovial fluid. Besides collagen, a few other ligands are described like Complement C1q, MBL, and SP-D. Complement activation of the classical pathway is controlled by C1q. By binding of LAIR-1 to C1q, pathway initiation is hampered leading to diminished complement related phagocytosis and immune regulation. The protein has been associated with several (auto-) immune diseases. In rheumatoid arthritis expression is decreased on CD4+ T-cells and high in CD14+ monocytes synovial macrophages. Also in SLE lower levels of LAIR-1 has been found on pDCs. sLAIR-1 might be an indicator of the immune response after virus infection or organ transplants. LAIR-1 modulates apoptosis and cytokine secretion in THP-1 cells.
<b>Immunogen</b>	Activated NK cells and CD3- thymocytes.
<b>Aliases</b>	Leukocyte-associated immunoglobulin-like receptor 1, hLAIR1, CD305
<b>Gene</b>	Gene name: LAIR1, CD305
<b>References</b>	<ol style="list-style-type: none"> <li>1. Zocchi, M et al; Leukocyte-associated Ig-like receptor-1 prevents granulocyte-monocyte colony stimulating factor-dependent proliferation and Akt1/PKB alpha activation in primary acute myeloid leukemia cells. <i>Eur J Immunol</i> 2001, <i>31</i>:3667</li> <li>2. Colombo, B et al; Defective Expression and Function of the Leukocyte Associated Ig-like Receptor 1 in B Lymphocytes from Systemic Lupus Erythematosus Patients. <i>PLoS ONE</i> 2012, <i>7</i>: e31903</li> </ol>
<b>Storage&amp;stability</b>	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

**Precautions**

For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

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We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC  
Brenda Teunissen

Date  
28/12/2020

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).