

# IOTest<sup>®</sup> CD85d (ILT4)-PE

PN A22334 – Liquid - 100 tests – 20 µL / test – Clone 42D1

For Research Use Only. Not For Use In Diagnostic Procedures.

## SPECIFICITY

CD85d (ILT4) is a member of the immunoglobulin (Ig)-like transcripts (ILT) family of genes located on human chromosome 19q13.4. ILT4 is also known as leucocyte Ig-like receptor (LIR)-2 and monocyte / macrophage Ig-like receptors (MIR)-10. ILT4 is a transmembrane protein of about 95 kDa under reducing conditions recognized by the 42D1 monoclonal antibody (1). The protein has 4 extracellular Ig-SF domains, and 3 ITIM motifs in the cytoplasmic tail that inhibit cellular responses by recruiting phosphatases such as SHP-1 (Src homology 2 domain containing tyrosine phosphatase 1). CD85d is confined to the myelomonocytic lineage as it is expressed on monocytes, macrophages, and dendritic cells (DCs). It is dimly expressed on neutrophils. No reactivity is observed on peripheral activated B cells and natural killer cells. ILT4 binds to non-classical HLA-G molecules with a 3- to 4-fold higher affinity than to classical MHC class I molecules (2). ILT4 may modulate one or several of the antigen presenting functions mediated by DCs, control inflammatory responses mediated by monocytes / macrophages or inhibit their cytotoxicity, enabling them to recognize tumor cells that have lost self HLA class I molecules. The recognition of HLA-G by ILT4 may play a role in materno-fetal tolerance as HLA-G is selectively expressed in the trophoblast (1). It has also been shown that recipient's CD8<sup>+</sup>CD28<sup>-</sup> T suppressor (Ts) cells may induce up-regulation of IHL3 and ILT4 in donor's monocytes and DCs rendering these antigen-presenting cells (APCs) tolerogenic as they are able to anergize, in a HLA-restricted manner, and via functional blockage of CD40-mediated signaling and NK-κB activation, alloreactive recipient's CD4<sup>+</sup> T helper cells (3, 4).

## REAGENT

IOTest CD85d (ILT4)-PE Conjugated Antibody  
PNA22334 – Liquid - 100 tests – 20 µL / test.

<b>Clone</b>	42D1
<b>Isotype</b>	IgG2a, rat
<b>Immunogen</b>	ILT4-transfected rat basophilic leukemia cell
<b>Hybridoma</b>	P3-X63-Ag.8.653 x Wistar rat
<b>Source</b>	Ascites fluid
<b>Purification</b>	Ion exchange and gel filtration.
<b>Conjugation</b>	R-phycoerythrin (PE)
<b>Molar Ratio</b>	PE / Ig : 0.5 – 2.8
<b>Fluorescence</b>	Excites at 488 nm Emits at 575 nm

## APPLICATION

Study of CD85d positive cells by flow cytometry.

## STATEMENTS OF WARNING

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.
2. Specimens, samples and all material coming in contact with them should be handled as if they might transmit infection and disposed of with proper precautions.
3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes
4. Do not use antibody beyond the expiration date on the label.
5. Do not expose reagents to strong light during storage or incubation.
6. Avoid microbial contamination of reagents or incorrect results might occur.
7. Use good laboratory practises when handling this reagent.

## STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze.

## REAGENT PREPARATION

No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

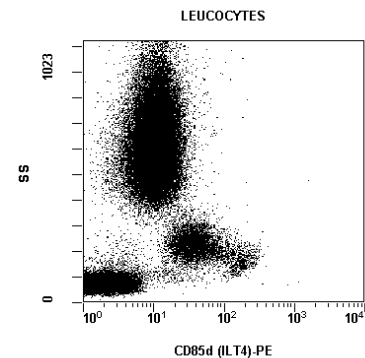
## PROCEDURE

This reagent is designed for flow cytometry. Assay volume: 20 µL per 5 x 10<sup>5</sup> cells in one test, or per 100 µL whole blood. A wash is required to yield optimal results.

## EXAMPLE DATA

The histogram below is a biparametric representation, side scatter (SS) versus fluorescence intensity of a lysed normal whole blood sample. Staining is with CD85d (ILT4)-PE.

Acquisition is with a Beckman Coulter<sup>®</sup> CYTOMICS FC 500 flow cytometer. Analysis is with the CXP analysis software.



## SELECTED RESEARCH REFERENCES

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4. Manavalan, J.S., Rossi, P.C., Vlad, G., Piazza, F., Yarinina, A., Cortesini, R., Mancini, D., Suci-Foca, N., "High expression of ILT3 and ILT4 is a general feature of tolerogenic dendritic cells", 2003, Transpl Immunol., 11, 245-258.

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