

DESCRIPTION

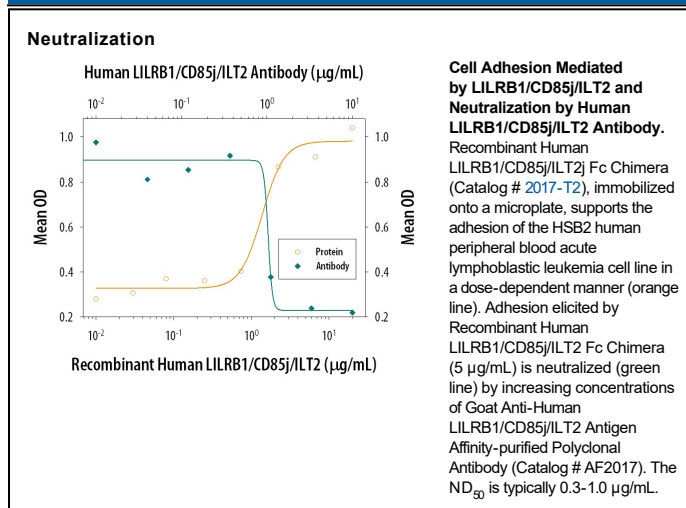
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|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human LILRB1/CD85j/ILT2 in direct ELISAs and Western blots. In direct ELISAs, approximately 25% cross-reactivity with recombinant human (rh) ILT4 is observed and 15% cross-reactivity with rhILT5 is observed. |
| Source | Polyclonal Goat IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | Mouse myeloma cell line NS0-derived recombinant human LILRB1/CD85j/ILT2 Gly24-His458 Accession # Q8NHL6 |
| Endotoxin Level | <0.10 EU per 1 µg of the antibody by the LAL method. |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

| | Recommended Concentration | Sample |
|-----------------------|---|--|
| Western Blot | 0.1 µg/mL | Recombinant Human LILRB1/CD85j/ILT2 Fc Chimera (Catalog # 2017-T2) |
| Flow Cytometry | 2.5 µg/10 ⁶ cells | Human whole blood monocytes |
| CyTOF-ready | Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation. | |
| Neutralization | Measured by its ability to neutralize LILRB1/CD85j/ILT2-mediated adhesion of the HSB2 human peripheral blood acute lymphoblastic leukemia cell line. Cosman, D. <i>et al.</i> (1997) <i>Immunity</i> 7:273. The Neutralization Dose (ND ₅₀) is typically 0.3-1.0 µg/mL in the presence of 5 µg/mL Recombinant Human LILRB1/CD85j/ILT2 Fc Chimera. | |

DATA



PREPARATION AND STORAGE

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|--------------------------------|--|
| Reconstitution | Reconstitute at 0.2 mg/mL in sterile PBS. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

BACKGROUND

The immunoglobulin-like transcript (ILT) family of activating and inhibitory type immunoreceptors are expressed on many leukocyte subsets and function in the regulation of immune responses (1-3). This family was also named leukocyte Ig-like receptors (LIR) and monocyte/macrophage Ig-like receptors (MIR). ILTs share significant homology with killer cell Ig-like receptors (KIR). The ILT genes are located on human chromosome 19q13.4 in the leukocyte receptor complex, which also include the genes encoding KIRs (4). With the exception of ILT-6, which is a soluble molecule, all ILT family members are type I transmembrane proteins having two or four extracellular Ig-like domains (2, 3). One subset of the ILT receptors (referred to as subfamily B of the LIRs) has long cytoplasmic tails containing immunoreceptor tyrosine-based inhibitory motifs (ITIMs) that inhibit signaling events by recruiting SH2-containing protein tyrosine phosphatase-1. Another subset of the ILT receptors (referred to as subfamily A of the LIRs) contains activating receptors with short cytoplasmic regions that lack signal transduction motifs. These receptors contain a basic arginine residue within their transmembrane domains, which allows association with Fc R γ , an immunoreceptor tyrosine-based activation motif (ITAM)-bearing signal adapter protein (1-3).

ILT2, also known as LIR1, MIR7, and CD85j, is expressed on most monocytes, dendritic cells, and mature B cells (1-3). It is also expressed on small percentages of T cells and NK cells. ILT2 has four extracellular Ig-like domains and three cytoplasmic ITIMs. It functions as an inhibitory receptor that prevents cellular activation. ILT2 has been shown to bind classical (HLA-A and -B) and nonclassical (HLA-G1, -E and -F) MHC class I molecules (MHC1) (1-3). ILT2 also binds with high affinity to an MHC class I homologue from human cytomegalovirus (3). Ligation of ILT2 by MHC class I may function to poise cellular activation thresholds and inhibit various leukocyte effector mechanisms that are regulated by MHC class I molecules on target cells.

References:

1. Allen, D. *et al.* (2000) *Immunobiol.* **202**:34.
2. Colonna, M. *et al.* (1999) *J. Leukocyte Biol.* **66**:375.
3. Borges, L. and D. Cosman (2000) *Cytokine Growth Factor Rev.* **11**:209.
4. Young, N. *et al.* (2001) *Immunogenetics* **53**:270.