

DESCRIPTION	
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human ILT4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) ILT1, rhILT2, rhILT3, rhILT6, rhILT7, rhILT11, rhLIR6 or rhLIR8 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 287219
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human ILT4 Gly24-His458 Accession # ACT64556
<b>Conjugate</b>	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
<b>Formulation</b>	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS		
<b>Please Note:</b> Optimal dilutions should be determined by each laboratory for each application. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.		
	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	10 $\mu$ L/10 <sup>6</sup> cells	See Below

**DATA**

**Flow Cytometry**

**Detection of LILRB2/CD85d/ILT4 in Human PBMCs by Flow Cytometry.** Human peripheral blood mononuclear cells (PBMCs) were stained with Mouse Anti-Human CD14 PE-conjugated Monoclonal Antibody (Catalog # [FAB3832P](#)) and either (A) Mouse Anti-Human LILRB2/CD85d/ILT4 APC-conjugated Monoclonal Antibody (Catalog # [FAB2078A](#)) or (B) Mouse IgG<sub>2A</sub> Allophycocyanin Isotype Control (Catalog # [IC003A](#)). View our protocol for [Staining Membrane-associated Proteins](#).

PREPARATION AND STORAGE	
<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

**BACKGROUND**

The immunoglobulin-like transcript (ILT) comprise a family of activating and inhibitory type immunoreceptors whose genes are located in the same locus that encodes killer cell Ig-like receptors (KIR) (1–3). ILT4, also known as LIR-2 and LILRB2, is a type I transmembrane protein expressed primarily on monocytes and dendritic cells (DC) (4). Human ILT4 is produced as a 598 amino acid (aa) precursor including a 21 aa signal sequence, a 440 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 116 aa cytoplasmic domain. The ECD contains four Ig-like domains, and the cytoplasmic domain contains three immunoreceptor tyrosine-based inhibitory motifs (ITIM) (5). The ECD of human ILT4 shares 76% aa identity with chimpanzee ILT4 and 74%, 81%, 33%, 52%, 77%, 61%, and 64 % aa identity with human ILT1, 2, 3, 5, 6, 7, and 8, respectively. ILT4 binds to classical MHC I proteins as well as the non-classical HLA-G1 and HLA-F molecules (5–9). It competes with CD8 $\alpha$  for MHC I binding but does not compete with KIR2DL1 (7). Ligation of ILT4 induces Tyr phosphorylation within its cytoplasmic ITIMs, a requirement for association with SHP-1 (4, 6). Activation of ILT4 inhibits signaling through Fc $\gamma$  RI (4) and Fc $\epsilon$  RI (6) and causes DC to become tolerogenic by downregulation of costimulatory molecules (10, 11). ILT4 mediates tolerogenic DC-induced CD4<sup>+</sup> T cell energy *in vitro* and *in vivo* (10–12).

**References:**

1. Suci-Foca, N. *et al.* (2005) *Int. Immunopharmacol.* **5**:7.
2. Hofmeister, V. and E.H. Weiss (2003) *Semin. Canc. Biol.* **13**:317.
3. Hunt, J.S. *et al.* (2005) *FASEB J.* **19**:681.
4. Finger, N.A. *et al.* (1998) *Eur. J. Immunol.* **28**:3423.
5. Borges, L. *et al.* (1997) *J. Immunol.* **159**:5192.
6. Colonna, M. *et al.* (1998) *J. Immunol.* **160**:3096.
7. Shiroishi, M. *et al.* (2003) *Proc. Natl. Acad. Sci.* **100**:8856.
8. Lepin, E.J.M. *et al.* (2000) *Eur. J. Immunol.* **30**:3552.
9. Allen, R.L. *et al.* (2001) *J. Immunol.* **167**:5543.
10. Chang, C.C. *et al.* (2002) *Nat. Immunol.* **3**:237.
11. Ristich, V. *et al.* (2005) *Eur. J. Immunol.* **35**:1133.
12. Manavalan, J.S. *et al.* (2003) *Transpl. Immunol.* **11**:245.