

DESCRIPTION

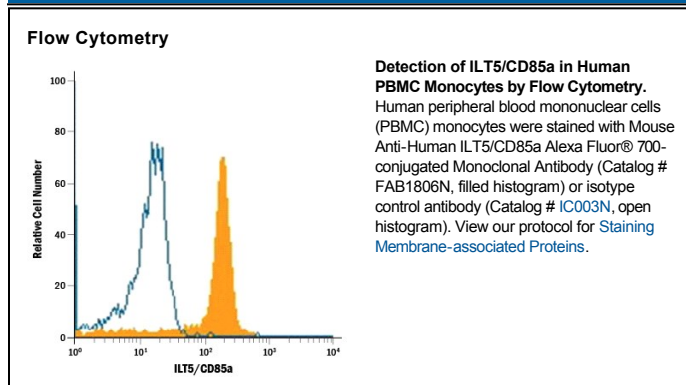
Species Reactivity	Human
Specificity	Detects human ILT5/CD85a in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) ILT1, rhILT2, rhILT3, rhILT4, rhILT6, rhILT7 or rhILT11 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 222821
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ILT5/CD85a Gly24-Glu443 Accession # AAB68668
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	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

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
Flow Cytometry	5 µL/10 ⁶ cells	See Below

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Immunoglobulin-Like Transcript 5 (ILT5), also known as Leukocyte Immunoglobulin-Like Receptor subfamily B (LILRB3), leukocyte immunoglobulin-Like Receptor 3 (LIR3) and CD85a, is an Ig-like receptor family member that is involved in immune regulation. ILT5 belongs to subfamily B whose members have cytoplasmic tails that contain Immunoreceptor Tyrosine-based Inhibitory Motifs (ITIMs) that inhibit signaling events via phosphatase SHP-1. The counterpart to subfamily B is subfamily A, whose members qualify as activating receptors that lack ITIMs, but signal through association with Fcγ. ILTs share structural homology and chromosomal localization with the KIR family of receptors (1, 2). Mature ILT5 is a highly polymorphic 85–95 kDa glycoprotein that consists of a 420 amino acid (aa) extracellular domain (ECD) with four Ig-like domains, a 21 aa transmembrane segment, and a 167 aa cytoplasmic domain with three ITIMs (3, 4). Alternate splicing generates an isoform with a 17 aa insertion in the juxtamembrane ECD. In mouse and rat, the LILRB3 gene encodes the PIR-B protein which has six Ig-like domains. Rodent PIR-B and human ILT5 share 55% aa sequence identity within common regions of their ECDs. Both PIR-B and ILT5 are receptors for *S. aureus*, and activation of these receptors by bacteria influences the innate immune response triggered by TLRs (4). ILT5 is expressed on the surface of peripheral monocytes, neutrophils, eosinophils, basophils, and mast cell progenitors but not on mature mast cells (5–7). On basophils, cross-linking of ILT5 to the activating receptors ILT1/LIR7 or FcεR1 inhibits the release of Histamine, Leukotriene C4, and IL-4 (6). On osteoclast precursors, ILT5 ligation inhibits RANKL or M-CSF induced differentiation (8). ILT5 is down-regulated on macrophages in rheumatoid arthritis synovial tissue following successful treatment with DMARD anti-rheumatic drugs (9).

References:

1. Brown, D. *et al.* (2004) *Tissue Antigens* **64**:215.
2. Borges, L. and D. Cosman (2000) *Cytokine Growth Factor Rev.* **11**:209.
3. SwissProt Accession # O75022.
4. Nakayama, M. *et al.* (2007) *J. Immunol.* **178**:4250.
5. Tedla, N. *et al.* (2003) *Proc. Natl. Acad. Sci.* **100**:1174.
6. Sloane, D.E. *et al.* (2004) *Blood* **104**:2832.
7. Tedla, N. *et al.* (2008) *J. Leukoc. Biol.* **83**:334.
8. Mori, Y. *et al.* (2008) *J. Immunol.* **181**:4742.
9. Huynh, O.A. *et al.* (2007) *Rheumatology* **46**:742.

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