Human LILRA4/CD85g/ILT7 Antibody

Monoclonal Mouse IgG_{2A} Clone # 656656

Catalog Number: MAB62871

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LILRA4/CD85g/ILT7 in ELISA. No cross-reactivity with human LILRA1, LILRA2, LILRA3, LILRA5, LILRA6, LILRB2 and LILRB3 with ELISA was observed.
Source	Monoclonal Mouse IgG_{2A} Clone # 656656
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line, NS0derived human LILRA4/CD85g/ILT7 Glu24-Asn446 Accession # P59901
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.

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.*

Neutralization	In a functional ELISA binding assay, 0.1-1.2 ug/mL of this antibody will block 50% of the binding of 0.3 ug/mL of Recombinant Human Angiopoietin-like Protein 7/ANGPTL7 (Catalog # 914-AN) when Recombinant Human LILRA4/CD85g/ILT7 (Catalog # 8914-T4) is immobilized at 1 ug/mL (100 µL/well). At 10 ug/mL, this antibody will block >90% of the binding.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 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

LILRA4, also known as ILT7 and CD85g, is an approximately 60-70 kDa variably glycosylated transmembrane protein that regulates immune cell activation (1). Mature human LILRA4 consists of a 423 amino acid (aa) extracellular domain (ECD) with four immunoglobulin-like domains, a 21 aa transmembrane segment, and a 32 aa cytoplasmic domain (2). Alternative splicing generates an additional isoform that lacks the signal peptide and a portion of the first Ig-like domain. LILRA4 is expressed on plasmacytoid dendritic cells (pDC) but is down-regulated in response to TLR9 signaling (3-5). Antibody mediated crosslinking of LILRA4 on pDC inhibits the production of type I interferons following TLR7 or TLR9 stimulation (3, 4, 6). It also blocks the up-regulation of CCR7 but enhances the up-regulation of Integrin β7 on TLR7/9-stimulated pDC (6). LILRA4 associates with the ITAM-containing adaptor protein Fcε RIγ (3, 4, 6), and this complex binds to cell surface BST2/Tetherin which is expressed on monocytes, plasmacytoid and myeloid dendritic cells, B cells, and activated $CD4^+$ and $CD8^+$ T cells (5, 8). This interaction inhibits the TLR-induced pDC production of type I interferons, IL-6, and TNF-α (8).

References:

1. Thomas, R. *et al.* (2010) Clin. Rev. Allergy Immunol. **38**:159.
2. Young, N.T. *et al.* (2001) Immunogenetics **53**:270.
3. Cho, M. *et al.* (2008) Int. Immunol. **20**:155.
4. Cao, W. *et al.* (2006) J. Exp. Med. **203**:1399.
5. Tavano, B. *et al.* (2013) J. Immunol. **190**:2622.
6. Tsukamoto, N. *et al.* (2009) Clin. Cancer Res. **15**:5733.
7. Tavano, B. and A. Boasso (2014) PLoS ONE **9**:e89414.
8. Cao, W. *et al.* (2009) J. Exp. Med. **206**:1603.

Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449