Human CLEC12B Alexa Fluor® 405-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 1062714

Catalog Number: FAB11476V

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CLEC12B in direct ELISA.
Source	Monoclonal Mouse IgG_{2B} Clone # 1062714
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese Hamster Ovary cell line, CHO-derived human CLEC12B Leu65-Asp276 Accession # Q2HXU8
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *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.*

Flow Cytometry	Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Sample used for this experiment was PBMC monocytes.

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

C-type lectin domain family 12 member B (CLEC12B) is a member of the C-type lectin-like family of proteins. CLEC12B is widely expressed at low levels in various human tissues except in the brain (1, 2). A truncated version lacking a portion of the carbohydrate-recognition domain (CRD) has been detected in mammary gland, lung and ovary, and was predicted to be nonfunctional (1). CLEC12B is a cell surface receptor that may play a role in viral recognition and modulate signaling cascades due to the presence of an ITIM motif within its cytoplasmic tail (1-3). Human CLEC12B is synthesized as a 276 amino acid (aa) protein that includes a 43 aa cytoplasmic domain, a 21 aa transmembrane segment, and a 212 aa extracellular domain (ECD). Within the ECD, human CLEC12B shares 74% and 70% aa sequence identity with mouse and rat CLEC12B, respectively. The extracellular domain of CLEC12B shows considerable homology to the activating natural killer cell receptor NKG2D, and it antagonizes NKG2D mediated signaling through the ITIM motif (1). CLEC12B may be involved in limiting the activity of monocyte-derived immune cells after cell differentiation and possibly during inflammatory diseases. They play a role in HIV-1, mycobacterial, and *Candida* infections, and the coevolution of hosts and pathogens (4). Pathogen recognition by C-type lectins triggers signaling pathways that lead to the expression of specific cytokines which subsequently instruct adaptive T helper immune responses (4).

References:

1. Hoffmann, S. *et al.* (2007) J. Biol. Chem. **282**:22370.
2. Huysamen, C. *et al.* (2009) FEMS Microbiol. Lett. **290**:121.
3. Monteiro, J.T. and B. Lepenies (2017) Viruses **9**:59.
4. van den Berg, L.M. *et al.* (2012) Ann N Y Acad Sci. **1253**:149.

PRODUCT SPECIFIC NOTICES

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