Human IL-16 Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 70720

Catalog Number: IC3161G

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-16.
Source	Monoclonal Mouse IgG_{2B} Clone # 70720
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human IL-16 isoform 1 Met1203-Ser1332 Accession # Q14005
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL 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
Intracellular Staining by Flow Cytometry	0.25-1 µg/10^6 cells	Raji human Burkitt's lymphoma cell line fixed with paraformaldehyde and permeabilized with saponin

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

Interleukin 16, also named lymphocyte chemoattractant factor (LCF), was originally identified as a $CD8^+$ T-cell-derived chemoattractant for $CD4^+$ cells. The biologically active form of IL-16 was originally proposed to be a homotetramer of 14 kDa chains containing 130 amino acid residue subunits. The complete pro-IL-16 cDNA was subsequently cloned and shown to encode a 631 amino acid residue hydrophilic protein that lacked a signal peptide. The original 130 amino acid residue polypeptide is now believed to have been derived from the C terminus of the precursor. IL-16 precursor protein has been detected in the lysates of various cells including mitogen stimulated PBMCs. The biologically active and secreted natural IL-16 is assumed to be a proteolytic cleavage product of pro-IL-16 generated by proteases present in or on activated $CD8^+$ cells. A likely cleavage site was proposed to be at aspartate residue 510. This would yield a 121 amino acid residue protein, smaller than the 130 aa residue protein first described. The expression of IL-16 precursor mRNA has been detected in various tissues including spleen, thymus, lymph nodes, peripheral leukocytes, bone marrow and cerebellum. The gene for IL-16 precursor has been localized to chromosome 15. The biological activities ascribed to IL-16 are reported to be dependent on the cell surface expression of CD4, suggesting that IL-16 is a CD4 ligand. Besides its chemotactic properties, IL-16 has also been shown to suppress HIV-1 replication *in vitro*. Recombinant *E. coli*-derived IL-16 produced at R&D Systems is present mostly as a monomer, exhibits chemotactic activity for lymphocytes at high concentrations, lacks chemotactic activites for monocytes, and binds the extracellular domain of CD4 with low affinity.

References:

1. Cruikshank, W.W. *et al.* (1994) Proc. Natl. Acad. Sci. USA **91**:5109.
2. Baier, M. *et al.* (1997) Proc. Natl. Acad. Sci. USA **94**:5273.
3. Zhou, A. *et al.* (1997) Nature Medicine **3**:659.
4. Bazan, J.F. and T.J. Schall (1996) Nature **381**:29.

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