Human IL-27 Fluorescein-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 307426

Catalog Number: IC25261F

100 Tests

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-27 in direct ELISAs.
Source	Monoclonal Mouse IgG_{2A} Clone # 307426
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-27 Arg21-Lys229 of EBI-3 (Accession #Q14213.2) and Phe29-Pro243 of p28 (Accession #AAM34498)
Conjugate	Fluorescein Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm (FITC)
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.

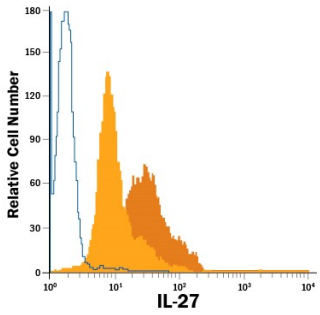
APPLICATIONS

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
Intracellular Staining by Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Intracellular Staining by Flow Cytometry



Detection of IL-27 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cell (PBMCs) either (A) untreated (light orange filled histogram) or (B) treated with PMA and Recombinant Human IL-2 (Catalog # 202-IL, dark orange filled histogram) were stained with Mouse Anti-Human IL-27 Fluorescein-conjugated Monoclonal Antibody (Catalog # IC25261F) or isotype control antibody (Catalog # IC003F, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

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

IL-27 is a non-covalent heterodimeric molecule that belongs to the IL-6/IL-12 family of long type I cytokines. It is composed of EBI3 (EBV-induced gene 3), a 33-34 kDa glycoprotein that is related to the p40 subunit of IL-12 and IL-23, and p28, the 28-30 kDa glycoprotein that is related to the p35 chain of IL-12. The human EBI3 gene encodes a 229 amino acid (aa) precursor that contains a 20 aa signal peptide and 209 aa mature protein. The mature region contains two potential N-linked glycosylation sites, two fibronectin type III domains, and two pairs of conserved cysteine residues with a WSXWS-like motif that places the molecule in the hematopoietin receptor family. Although p40, the EBI3 counterpart in IL-12, is known to form homodimers, there is no evidence to date that EBI3 also homodimerizes.However, EBI3 is known to heterodimerize with the p35 subunit of IL-12, generating the cytokine IL-35. Human EBI3 is 61% aa identical to mouse EBI3. The human p28 gene encodes a 243 aa precursor that contains a 28 aa signal sequence and 215 aa mature region. The mature region is characterized by the presence of four α-helices, placing it in the IL-6 family of helical cytokines. Human p28 is 70% aa identical to mouse p28. IL-27 is expressed by monocytes, endothelial cells and dendritic cells. IL-27 binds to and signals through a heterodimeric receptor complex composed of WSX-1 (TCCR) and gp130. Evidence suggests IL-27 interacts only with WSX-1. p28 also heterodimerizes with CLF1 and signals through the IL-6R:gp130 complex. IL-27 has both anti- and proinflammatory properties. As an anti-inflammatory, IL-27 seems to induce a general negative feedback program that limits T and NK-T cell activity. At the onset of infection, IL-27 induces an IL-12 receptor on naïve $CD4^+$ T cells, making them susceptible to subsequent IL-12 activity that generates Th1 cells at the expense of Th2 and Th17 cells. Finally, IL-27 upregulates both MHC-II and chemokine (CXCL9; CXCL10) expression on vascular endothelium, suggesting a role for IL-27 in vascular inflammation.

bio-techne®
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