

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-27 in ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-27 (R&D Systems, Catalog # 2526-IL) Arg21-Lys229 (IL-27 EBI-3 subunit), Phe29-Pro243 (IL-27 p28 subunit) Accession # Q14213 (EBI-3 subunit), AAM34498 (p28 subunit)
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% 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.

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
Neutralization	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.

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 heterodimeric group 2 receptor ligand molecule that belongs to the IL-6/IL-12 family of long type I cytokines (1). It is composed of EBI3 (EBV-induced gene 3), also known as IL27B, a 34 kDa glycoprotein that is related to the p40 subunit of IL-12 and IL-23, and p28, also known as IL27A, the 28 kDa glycoprotein that is related to the p35 chain of IL-12 (2-4). The human EBI3 gene encodes a 229 amino acid (aa) precursor that contains a 20 aa signal peptide and 209 aa mature protein (5). 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 (5). Although p40, the EBI3 counterpart in IL-12, is known to form homodimers, there is no evidence to date that EBI3 also homodimerizes. 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 (6). 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 74% aa identical to mouse p28. IL-27 is expressed by monocytes, endothelial cells and dendritic cells (7). 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 (6, 8, 9). 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 (3, 7). 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 (and possible Th1 development) (10).

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