

Rabbit Polyclonal IL32 antibody

Catalog Number: IL32-101AP

Lot Number:

General Information

Product	IL32 Antibody
Description	Interleukin-32 Antibody Affinity Purified
Accession #	Uniprot: P24001
Verified Applications	ELISA, IP, WB
Species Cross Reactivity	Human, Mouse, Rat
Host	Rabbit
Immunogen	Synthetic peptide taken within amino acid region 180-234 on human Interleukin-32 (natural killer cells protein 4). The synthetic peptide was post-synthetically modified and conjugated to KLH to achieve desired antigenicity.
Alternative Nomenclature	Natural killer cell transcript 4 antibody, NK4 antibody, TAIF antibody, Tumor necrosis factor alpha-inducing factor antibody

Physical Properties

Quantity	100 µg
Volume	200 µl
Form	Affinity Purified Immunoglobulins
Immunoglobulin & Concentration	0.5 mg/ml IgG in antibody stabilization buffer
Determinant	C-terminal
Storage	Store at -20°C for long term storage.

Recommended Dilutions

DOT Blot	1:10,000
ELISA	1:10,000
Immunoprecipitation	1:200
Western Blot	1:500

Related Products

Catalog

BIOTIN-Conjugated	IL32-BIOTIN
FITC-Conjugated	IL32-FITC
Antigenic Blocking Peptide	P-IL32
Western Blot Positive Control	PC-IL32

Overview:

IL32 is produced by T-lymphocytes, natural killer cells, epithelial cells and blood monocytes (1). The proinflammatory properties of IL32 include induction of other proinflammatory cytokines and chemokines such as TNF alpha, IL-1beta, IL6 and IL8 by activation of NF-kB and p38 mitogen activated protein kinase (1, 2). IL32 augments 10-fold production of IL1B and IL6 induced by muramyl dipeptides by NOD1 and NOD2 domains through caspase 1-dependent mechanism. Elevated levels of IL32 were noted in synovial tissues of patients with rheumatoid arthritis and the levels coincide with the severity of disease (3). The IL32 gene is located on chromosome 16p13.3 and at least four different mRNA transcripts resulting from mRNA splicing are known. IL32 is most abundant in A549 cells. IL32 binds to myeloblastin also known as Wegener autoantigen or proteinase 3 (PR3), which is a serine protease in neutrophils and monocytes that is capable of processing multiple biological substrate (4). There are four isoforms of this IL32: A, B, C and D. The four isoforms, IL32A-IL32D, have an effect on induction of TNF alpha, IL-1beta, IL6 and chemokines respectively. The IL32 alpha isoform specifically binds with a 30kDa proteinase (PR3) in macrophages (1).

The IL32 alpha is secreted from several cells upon stimulation of some inflammatory cytokines such as IL-18, IL-1beta, IFN-gamma and IL-12. IL32 also induces production of tumor necrosis factor, macrophage inflammatory protein MIP-2 and IL-8 in monocytic cell lines, suggesting that this factor may be involved in the inflammatory responses. Based on these findings, NK4 was renamed IL-32. IL32 induction in activated T-cells causes apoptosis and down regulation of IL32 rescued the cells from apoptosis in HeLa cells (2). IL-32 is a cell-associated proinflammatory cytokine, which is specifically stimulated by mycobacteria through a caspase-1- and IL-18-dependent production of IFN gamma (3). Proinflammatory cytokine cascades also play important role in rheumatoid arthritis, ischemic colitis, the IL32 expression is elevated in synovial fluids of these patients (4). IL32 alpha is the shortest of the 4 isotypes of IL32 known. IL32 alpha is 134, IL32 beta is 188, IL32C is 168 and IL32D is 179 amino acids long proteins. Each subtype has an N-terminal segment and four kringle domains (NK4), that interact with several other proteins including the hepatic growth factor via c-met, a tyrosine receptor kinase (5). IL-32 synergized with the intracellular nuclear oligomerization domain receptors, NOD1- and NOD2-specific muropeptides of peptidoglycans, for the release of IL-1beta and IL-6. In contrast, IL-32 did not influence the cytokine production induced via TLRs (6).

The anti-IL32 selective antibodies were made against an epitope that lies near the C-terminal end of the protein taken within the last 50 amino acids. The IL32 -selective antibodies are affinity purified on an immobilized antigen based affinity matrix. The isolated antibodies were then stabilized in antibody stabilization buffer for long-term storage. Antigenic blocking peptides (P-IL32) and western blot positive controls (PC-IL32) are available. The anti-IL32 antibodies recognize a single band of IL32 in PC-IL32 samples. The IL32 antibodies do not cross react with other pro-inflammatory or anti-inflammatory interleukins, or with other proteins. Antibodies can be conjugated to secondary enzymes or fluorophores upon request at nominal costs. For a complete listing of all FabGennix products and services please visit <http://fabgennix.com>.

References:

1. Kim S. H., Han S. Y., Azam T., Yoon D.-Y., Dinarello C. A. *Immunity*. 2005;22:131–142.
2. Netea M. G. et. al., *Proc. Natl. Acad. Sci. USA*. 2005;102:16309–16314.
3. Leo A. B. et. Al., IL-32, a proinflammatory cytokine in rheumatoid arthritis. *Proc Natl Acad Sci U S A*. 2006 February 28; 103(9): 3298–3303.
4. Baggiolini M., Bretz U., Dewald B., Feigenson M. E. *Agents Actions*. 1978;8:3–10.
5. Novick D et. al., Proteinase 3 is an IL-32 binding protein. *Proc Natl. Acad. Sci. U S A*. 2006 Feb 28;103(9):3316-21.
6. Goda C, Kanaji T etl. Al., Involvement of IL-32 in activation-induced cell death in T cells.. *Int. Immunol*. 2006 Feb;18(2):233-40.

* For users who may require large amounts of the products listed above, please inquire about bulk material discounts.

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