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IL-15 Antibody

Catalog # ASC11615

Product Information

Application	WB, E, IHC-P
Primary Accession	P40933
Other Accession	NP_000576, 10835153
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	18086
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	IL-15 antibody can be used for detection of IL-15 by Western blot at 1 - 2 g/mL.

Additional Information

Gene ID	3600
Other Names	Interleukin-15, IL-15, IL15
Target/Specificity	IL15; At least two isoforms of IL-15 are known to exist.
Reconstitution & Storage	IL-15 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	IL-15 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IL15
Function	Cytokine that plays a major role in the development of inflammatory and protective immune responses to microbial invaders and parasites by modulating immune cells of both the innate and adaptive immune systems (PubMed:15123770). Stimulates the proliferation of natural killer cells, T-cells and B-cells and promotes the secretion of several cytokines (PubMed:8178155, PubMed:9326248). In monocytes, induces the production of IL8 and monocyte chemotactic protein 1/CCL2, two chemokines that attract neutrophils and monocytes respectively to sites of infection (PubMed:9326248). Unlike most cytokines, which are secreted in soluble form, IL15 is expressed in association with its high affinity IL15RA on the surface of IL15-producing cells and delivers signals to target cells that express IL2RB and IL2RG receptor subunits (PubMed:10233906, PubMed:23104097, PubMed:8026467). Binding to its receptor triggers the phosphorylation of

	JAK1 and JAK3 and the recruitment and subsequent phosphorylation of signal transducer and activator of transcription-3/STAT3 and STAT5 (PubMed:7568001). In mast cells, induces the rapid tyrosine phosphorylation of STAT6 and thereby controls mast cell survival and release of cytokines such as IL4 (By similarity).
Cellular Location	[Isoform IL15-S48AA]: Secreted.
Tissue Location	Most abundant in placenta and skeletal muscle. It is also detected in the heart, lung, liver and kidney. IL15-S21AA is preferentially expressed in tissues such as testis and thymus

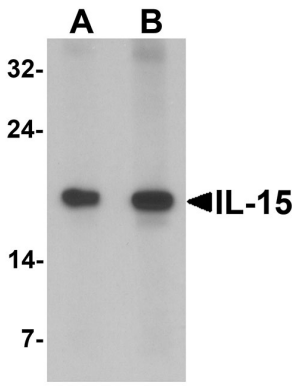
Background

IL-15 Antibody: Interleukin 15 (IL-15) is a cytokine that regulates T and natural killer cell activation and proliferation. This cytokine and IL-2 share many biological activities as both have been found to bind common hematopoietin receptor subunits, and may compete for the same receptor, and thus negatively regulate each other's activity. The number of CD8+ memory cells is shown to be controlled by a balance between IL-15 and IL-2. This cytokine induces the activation of JAK kinases, as well as the phosphorylation and activation of transcription activators STAT3, STAT5, and STAT6. In mouse, studies suggest that IL-15 may increase the expression of apoptosis inhibitor Bcl-xL, possibly through the transcription activation activity of STAT6, and thus prevent apoptosis.

References

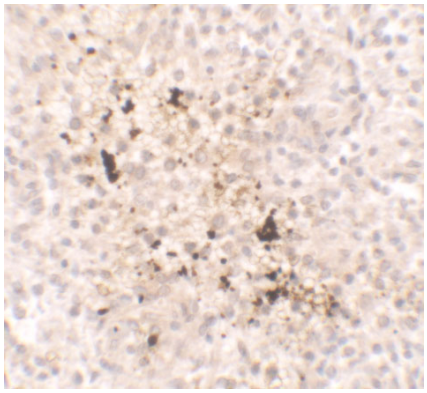
Bodnar A, Nizsaloczki E, Mocsar G, et al. A biophysical approach to IL-2 and IL-15 receptor function: localization, conformation and interactions. Immunol. Lett. 2008; 116:117-25.
Ku CC, Murakami M, Sakamoto A, et al. Control of homeostasis of CD8+ memory T cells by opposing cytokines. Science 2000; 288:675-8.
Waldmann T, Tagaya Y, and Bamford R. Interleukin-2, interleukin-15, and their receptors. Int. Rev. Immunol. 1998; 16:205-26.
Masuda A, Matsuguchi T, Yamaki K, et al. Interleukin-15 prevents mouse mast cell apoptosis through STAT6-mediate Bcl-xL expression. J. Biol. Chem. 2001; 276:26107-13.

Images



Western blot analysis of IL-15 in rat spleen tissue lysate with IL-15 antibody at (A) 1 and (B) 2 µg/mL

Immunohistochemistry of IL-15 in spleen tissue with IL-15 antibody at 2.5 µg/ml.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.