

Anti-IL-21 Antibody

Catalog Number: A00459

About IL21

A novel cytokine was recently identified in human and mouse and designated IL-21, which has significant homology to IL-2, IL-4, and IL-15. The receptor for IL-21 (IL-21R, also termed NILR for novel Interleukin receptor) is a new member of the class I cytokine receptor family. IL-21R forms a complex with the common cytokine receptor gamma chain, gammac, and mediates IL-21 signaling. IL-21 and its receptor activate JAK-STAT signaling pathway. IL-21 is expressed in activated T cells, and HL-60 and THP-1 cell lines. IL-21 plays a role in the proliferation and maturation of NK, B and T cell populations.

Overview

Product Name	Anti-IL-21 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-IL-21 Antibody (Catalog # A00459). Tested in ELISA, WB, IHC-P applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, IHC-P, WB
Clonality	Polyclonal
Formulation	IL-21 Antibody is supplied in PBS containing 0.02% sodium azide.
Storage Instructions	IL-21 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. Avoid repeated freeze-thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Host	Rabbit
Uniprot ID	Q9HBE4

Technical Details

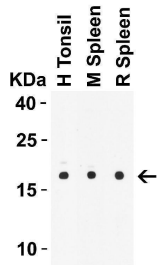
Immunogen	Anti-IL-21 antibody was raised against a peptide corresponding to 15 amino acids near the center of human IL-21 precursor. The immunogen is located within the last 50 amino acids of IL-21.
Predicted Reactive Species	Bovine, Pig
Cross Reactivity	At least two isoforms of IL-21 are known to exist; this antibody will detect both isoforms. IL-21 antibody is predicted to not cross-react with other members of the interleukin protein family.
Isotype	IgG
Form	Liquid
Concentration	1 mg/ml
Purification	IL-21 Antibody is affinity chromatography purified via peptide column.

Suggested Dilutions

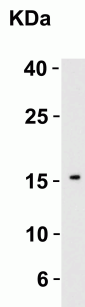
WB: 0.5-2 ug/mL; IHC-P: 0.5-2 ug/mL.

Antibody validated: Western Blot and Immunohistochemistry in human, mouse and rat samples. All other applications and species not yet tested.

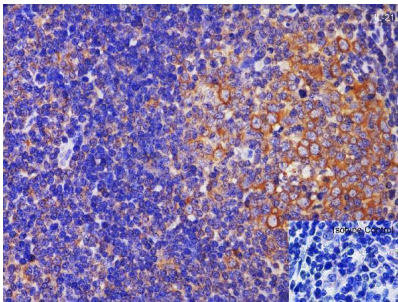
Anti-IL-21 Antibody (A00459) Images



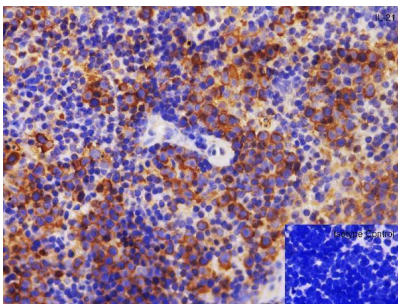
Western Blot Validation in Human, Mouse and Rat Tissues
Loading: 15 ug of lysates per lane. Antibodies: IL-21 A00459, (1 ug/mL), 1h incubation at RT in 5% NFDN/TBST.
Secondary: Goat anti-rabbit IgG HRP



Western Blot Validation with Recombinant Protein Loading:
30 ng of human IL-21 recombinant protein per lane.
Antibodies: IL-21 A00459 (0.5 ug/mL), 1h incubation at RT in 5% NFDN/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.

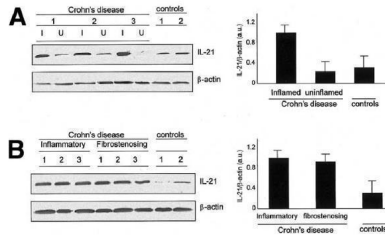
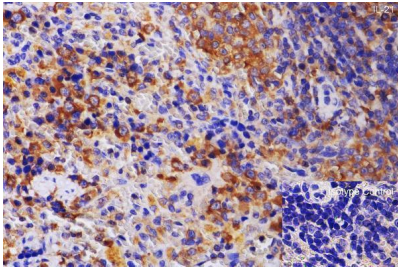


Immunohistochemistry Validation of IL-21 in Human Tonsil
Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-IL-21 antibody (A00459) at 1 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.

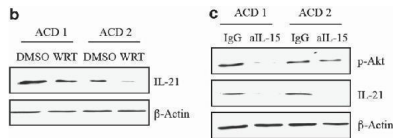


Immunohistochemistry Validation of IL-21 in Mouse Spleen
Immunohistochemical analysis of paraffin-embedded mouse spleen tissue using anti-IL-21 antibody (A00459) at 1 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.

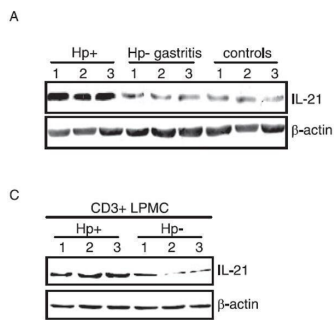
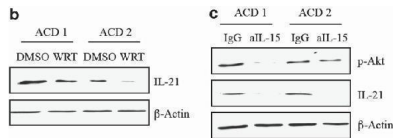
Immunohistochemistry Validation of IL-21 in Rat Spleen
Immunohistochemical analysis of paraffin-embedded rat spleen tissue using anti-IL-21 antibody (A00459) at 1 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



Induced Expression Validation of IL-21 expression in patients with Crohn's Disease (Monteleone et al, 2007) Enhanced IL-21 was observed in involved but not uninvolved CD, and was not associated with any CD phenotype, such as fibrostenosing disease. IL-21 expression was detected by anti-IL-21 antibodies (A00459).



Regulation of IL-21 expression in duodenal biopsies of two patients with active Celiac disease (ACD) (Sarra et al., 2013) (b) shows IL-21 expression levels treated with dimethyl sulfoxide (DMSO) or wortmannin (WRT). (c) shows IL-21 expression levels with the inhibition of IL-15 antibody (aIL-15). IgG isotype was used as a control. Both WB show IL-21 expression decreased with the treatment with WRT or the inhibition of IL-15 antibody.



Induced Expression Validation of IL-21 expression in patients with Helicobacter Pylori (Hp) (Caruso et al., 2007) (A) shows IL-21 expression levels from biopsies of patients with Hp infection and without Hp infection (n=3). (C) shows IL-21 expression levels in CD3+LPMC cells from Hp-positive and Hp-negative patients (n=3). Both WB show IL-21 expression increased in patients with Hp infection.

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