

## Product datasheet for **AP09162PU-S**

### IL21 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, WB
Recommended Dilution:	ELISA: 1/6,000. Western Blot: 1 µg/mL.
Reactivity:	Bovine
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Recombinant protein raised in yeast, corresponding to amino acid residues 24-152 of bovine IL-21 protein
Specificity:	This antibody reacts to Interleukin-21.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 containing 0.01% (w/v) Sodium Azide State: Aff - Purified State: Liquid (sterile filtered)
Concentration:	lot specific
Purification:	Affinity chromatography on Protein A
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Database Link:	<a href="#">Entrez Gene 378475 Bovine Q76LU5</a>



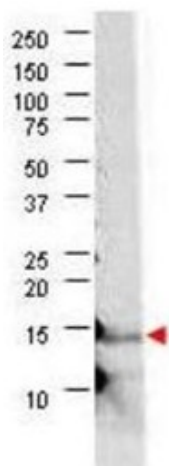
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**Background:**

Interleukin-21 (IL-21) is a secreted, type-I cytokine with immunoregulatory activity. Human IL-21 shares the common  $\gamma$ -chain with IL-2, IL-4, IL-7, IL-9, and IL-15 proteins but, in addition, binds to a unique IL-21Ra chain which triggers a cascade of events which includes activation of the tyrosine kinases JAK1 and JAK3, followed by activation of the transcription factors STAT1 and STAT3. Bovine and human IL-21 have pleiotropic functions and are mainly produced by activated T-cells in response to antigenic stimulation, but target a broad range of lymphoid and myeloid cells of the immune system (T cells, B cells, natural killer (NK) cells and dendritic cells). IL21 is therefore is able to regulate innate and acquired immune responses. The biological effects of IL-21 include induction of differentiation, maturation, and proliferation of T-cells-stimulated B-cells into plasma cells and memory B-cells, stimulation (in conjunction) with IL-4 of IgG production, and induction of apoptotic effects in naive B-cells and stimulated B-cells in the absence of T-cell signaling. Human IL-21 has also been shown to promote the anti-tumor activity of CD8+ T-cells and NK cells. During T-cell mediated immune response, IL21 may inhibit dendritic cells' (DC) activation and maturation. In synergy with IL15 and IL18, IL21 stimulates interferon gamma production in T-cells and NK cells; with the IL15, it may play a role in proliferation and maturation of natural killer (NK) cells. The open reading frame of the bovine IL-21 cDNA is 459 bp in length and encodes 152 amino acids. The predicted amino acid sequence is 78-81% and 58-67% homologous to the predicted human and murine IL-21 amino acid sequences, respectively. In one study, recombinant bovine IL-21 strongly induced NK cell proliferation using a human NK cell-line, NK0, and enhanced the lymphokine activated killer (LAK) activity of bovine peripheral blood mononuclear cells. In another by the same authors, recombinant bovine mature IL-21 induced the proliferation of human IL-2-dependent cells, ILT-MAT

**Synonyms:**

IL-21, Za11

**Product images:**

Western blot using anti-bovine IL-21 antibody shows detection of recombinant bovine IL-21 at 15.1kDa (arrow) raised in yeast. Protein was purified and resolved by SDS-PAGE, transferred to PVDF membrane. Membrane was blocked with 3% BSA (BSA-30, diluted 1:10), and probed with Immunochemicals, Inc. Anti-bovine IL-21. After washing, membrane was probed with Dylight (TM) 649 Conjugated Anti-Rabbit IgG (H&L) (Donkey) Antibody