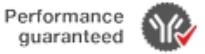


IL-21 Monoclonal Antibody (FFA21), Functional Grade, eBioscience™



Catalog Number 16-7211-82

Product Data Sheet

Details		Species Reactivity	
Size	100 µg	Tested species reactivity	Mouse
Host / Isotype	Rat / IgG2a, kappa	Published Species Reactivity	Not Applicable
Class	Monoclonal	Tested Applications	Dilution *
Type	Antibody	Functional Assay (FN)	Assay-Dependent
Clone	FFA21	Neutralization (Neu)	Assay-Dependent
Conjugate	Functional Grade	Published Applications	
Form	Liquid	Functional Assay (FN)	See 2 publications below
Concentration	1mg/mL	Miscellaneous (Misc)	See 2 publications below
Purification	Affinity chromatography	Neutralization (Neu)	See 2 publications below
Storage Buffer	PBS, pH 7.2	Immunofluorescence (IF)	See 1 publications below
Contains	no preservative	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Storage Conditions	4° C		

Product Specific Information

Description: This FFA21 monoclonal antibody reacts with mouse interleukin-21 (IL-21). IL-21 is a 17 kDa immunomodulatory cytokine produced mainly by NKT, T helper (Th) 17 and T follicular helper (TFH) cells. In TFH cells, IL-21 expression leads to autocrine signaling through the IL-21 receptor (IL-21R) and STAT3, which leads to additional transcriptional activation by Bcl6. As with IFN gamma for Th1, IL-4 for Th2 and IL-17A for Th17, IL-21 is critical for TFH cell effector function. This cytokine plays a role in T cell-dependent B cell differentiation into plasma cells and memory cells, stimulation of IgG production and induction of apoptotic signaling in naive B cells.

In Th17 cells, IL-21 expression and autocrine feedback through STAT3, IRF4 and ROR gamma t lead to upregulation of the IL-23R, thereby preparing Th17 cells for maturation and maintenance by the inflammatory cytokine IL-23. While upregulating IRF4 and ROR gamma t, IL-21 also mediates the downregulation of Foxp3. High levels of IL-21 are present in chemically-induced colitis models. IL-21-deficient mice are protected from developing colitis upon chemical treatment by their inability to upregulate Th17-associated molecules.

Preliminary data suggest that clone FFA21 recognizes a different epitope than anti-mouse IL-21 clone mhalx21 (cat. 51-7213).

Applications Reported: The monoclonal antibody FFA21 reacts with and inhibits the bioactivity of mouse IL-21.

Applications Tested: The ND50 of FFA21, as determined by the inhibition of recombinant mouse IL-21-induced proliferation of the B9 cell line, is 0.2-0.5 µg/mL in the presence of 0.5 ng/mL recombinant mouse IL-21. The neutralization dose of this antibody will vary depending on cell type, assay method, and concentration of cytokine.

Endotoxin: Less than 0.001 ng/ug antibody as determined by the LAL assay.

Storage and handling: Use in a sterile environment.

Filtration: 0.2 µm post-manufacturing filtered.

Purity: Greater than 90%, as determined by SDS-PAGE.

Endotoxin Level: Less than 0.001 ng/µg antibody, as determined by LAL assay.

Aggregation: Less than 10%, as determined by HPLC.

Background/Target Information

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

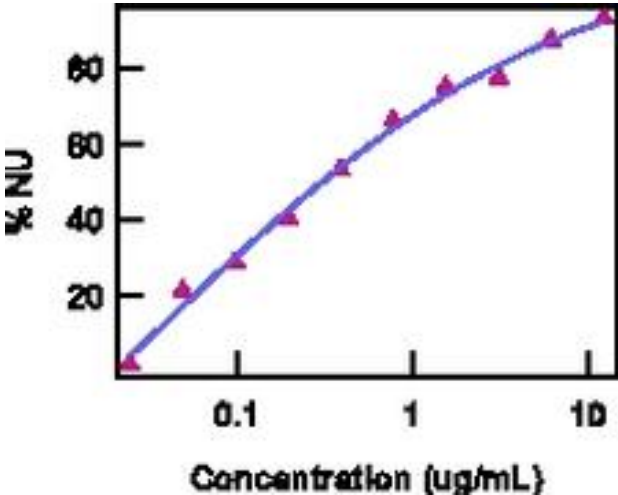
Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCT(S) IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.

IL-21 is a 17 kDa immunomodulatory cytokine produced mainly by NKT, T helper (Th) 17 and T follicular helper (TFH) cells. In TFH cells, IL-21 expression leads to autocrine signaling through the IL-21 receptor (IL-21R) and STAT3, which leads to additional transcriptional activation by Bcl6. As with IFN gamma for Th1 and IL-4 for Th2 cells, IL-21 is critical for TFH cell development and effector function. This cytokine plays a role in T cell-dependent B cell differentiation into plasma cells and memory cells, stimulation of IgG production and induction of apoptotic signaling in naive B cells. In Th17 cells, IL-21 expression and autocrine feedback through STAT3, IRF4 and ROR gamma t lead to upregulation of the IL-23R, thereby preparing Th17 cells for maturation and maintenance by the inflammatory cytokine IL-23. While upregulating IRF4 and ROR gamma t, IL-21 also mediates the downregulation of Foxp3. High levels of IL-21 are present in chemically-induced colitis models. IL-21-deficient mice are protected from developing colitis upon chemical treatment by their inability to upregulate Th17-associated molecules.

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Product Images for IL-21 Monoclonal Antibody (FFA21), Functional Grade, eBioscience™



Neutralization of Mouse IL-21 Recombinant Protein activity as measured by B9 cell proliferation.

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.