

# IL-21 Monoclonal Antibody (FFA21), eFluor™ 660, eBioscience™

## Product Details

Size	100 µg
Species Reactivity	Mouse
Published Species	Mouse
Host/Isotype	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), eFluor™ 660, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	FFA21
Conjugate	eFluor™ 660
Excitation/Emission Max	651/668 nm
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_10596796

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.25 µg/test	4 Publications
ELISA (ELISA)	-	1 Publication
Neutralization (Neu)	-	1 Publication

## 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: This FFA21 antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

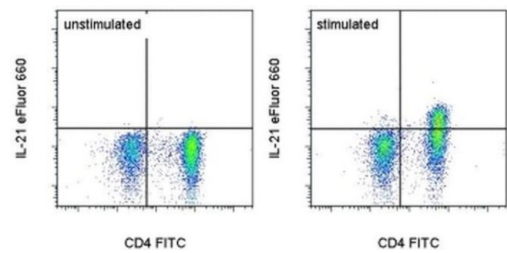
**Applications Tested:** This FFA21 antibody has been tested by intracellular staining and flow cytometric analysis of Th17 stimulated mouse cells. This can be used at less than or equal to 0.25 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

eFluor® 660 is a replacement for Alexa Fluor® 647. eFluor® 660 emits at 659 nm and is excited with the red laser (633 nm). Please make sure that your instrument is capable of detecting this fluorochohme.

Excitation: 633-647 nm; Emission: 668 nm; Laser: Red Laser.

Filtration: 0.2 µm post-manufacturing filtered.

**Product Images For IL-21 Monoclonal Antibody (FFA21), eFluor™ 660, eBioscience™**



**IL-21 Antibody (50-7211-82) in Flow**

Intracellular staining of 10-day Th17-polarized BALB/c splenocytes unstimulated (left) or stimulated for 5 hours with Cell Stimulation Cocktail (plus protein transport inhibitors) (Product # 00-4975-03) (right) with Anti-Mouse CD4 FITC (Product # 11-0042-82) and 0.125 µg of Rat IgG2a K Isotype Control eFluor® 660 (Product # 50-4321-82) or 0.125 µg of Anti-Mouse IL-21 eFluor® 660. Viable cells (as determined by Fixable Viability Dye eFluor® 450 (Product # 65-0863-14) were used for analysis.

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## Flow Cytometry (4)

<p><b>Med (New York, N.Y.)</b></p> <p><b>A booster dose enhances immunogenicity of the COVID-19 vaccine candidate ChAdOx1 nCoV-19 in aged mice.</b></p> <p>"50-7211-82 was used in Flow Cytometry to show that ChAdOx1 nCoV-19 induces both cellular and humoral immunity in adult and aged mice and suggest a prime-boost strategy is a rational approach to enhance immunogenicity in older persons."</p> <p>Authors: Silva-Cayetano A,Foster WS,Innocentin S,Belij-Rammerstorfer S,Spencer AJ,Burton OT,Fra-Bidó S,Le Lee J,Thakur N,Conceicao C,Wright D,Barrett J,Evans-Bailey N,Noble C,Bailey D,Liston A,Gilbert SC,Lambe T,Linterman MA</p>	<p><b>Year</b> 2021</p> <p><b>Species</b> Mouse</p>
<p><b>Malaria journal</b></p> <p><b>Characterization of T cells in lung of Plasmodium yoelii-infected C57BL/6 mice.</b></p> <p>"Published figure using IL-21 monoclonal antibody (Product # 50-7211-82) in Flow Cytometry"</p> <p>Authors: Wei H,Jin C,Peng A,Xie H,Xie S,Feng Y,Xie A,Li J,Fang C,Yang Q,Qiu H,Qi Y,Yin Z,Wang X,Huang J</p>	<p><b>Year</b> 2021</p>

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## ELISA (1)

<p><b>Nature communications</b></p> <p><b>Hepatitis B virus persistence in mice reveals IL-21 and IL-33 as regulators of viral clearance.</b></p> <p>"Published figure using IL-21 monoclonal antibody (Product # 50-7211-82) in ELISA"</p> <p>Authors: Shen Z,Yang H,Yang S,Wang W,Cui X,Zhou X,Liu W,Pan S,Liu Y,Zhang J,Zhang J,Xie Y,Liu J</p>	<p><b>Year</b> 2017</p>
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## Neutralization (1)

<p><b>The Journal of clinical investigation</b></p> <p><b>miR-146a modulates autoreactive Th17 cell differentiation and regulates organ-specific autoimmunity.</b></p> <p>"Published figure using IL-21 monoclonal antibody (Product # 50-7211-82) in Neutralization"</p> <p>Authors: Li B,Wang X,Choi IY,Wang YC,Liu S,Pham AT,Moon H,Smith DJ,Rao DS,Boldin MP,Yang L</p>	<p><b>Year</b> 2017</p>
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