

IL-21 Monoclonal Antibody (mhalx21), 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	mhalx21
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_11219485

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.5 µg/test	4 Publications

Product Specific Information

Description: The monoclonal antibody mhalx21 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 mhalx21 recognizes a different epitope than anti-mouse IL-21 clone FFA21 (cat. 51-7211).

Applications Reported: This mhalx21 antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

Applications Tested: This mhalx21 antibody has been tested by intracellular staining and flow cytometric analysis of Th17-

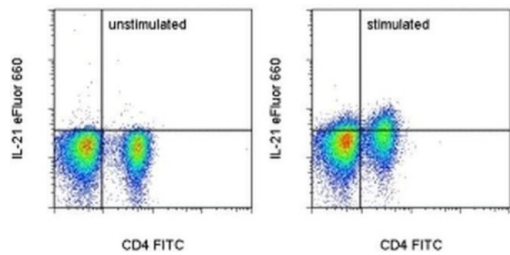
polarized mouse splenocytes using the IC Fixation and Permeabilization Buffers (cat. 88-8823) and protocol. This can be used at less than or equal to 0.5 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10⁵ to 10⁸ 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 fluorochohome.

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

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For IL-21 Monoclonal Antibody (mhalx21), eFluor™ 660, eBioscience™



IL-21 Antibody (50-7213-82) in Flow
Mouse splenocytes were cultured under Th17-polarizing conditions for 7 days, then treated for 5 hours with the Protein Transport Inhibitor Cocktail (Product # 00-4980-03) (left) or the Cell Stimulation Cocktail (plus protein transport inhibitors) (Product # 00-4975-03) (right). Intracellular staining with Anti-Mouse CD4 FITC (Product # 11-0042-82) and 0.25 µg of Anti-Mouse IL-21 eFluor® 660 was performed using the Fixation and Permeabilization Buffers (Product # 88-8823-88) and protocol. Total viable cells were used for analysis.

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4 References

Flow Cytometry (4)

<p>Journal of leukocyte biology</p> <p>Transcription factor c-Rel mediates communication between commensal bacteria and mucosal lymphocytes.</p> <p>"Published figure using IL-21 monoclonal antibody (Product # 50-7213-82) in Flow Cytometry"</p> <p>Authors: Luu M,Binder K,Hartmann S,Kespohl M,Bazant J,Romero R,Schütz B,Steinhoff U,Visekruna A</p>	<p>Year</p> <p>2022</p>
<p>Journal of virology</p> <p>A Methyltransferase-Defective Vesicular Stomatitis Virus-Based SARS-CoV-2 Vaccine Candidate Provides Complete Protection against SARS-CoV-2 Infection in Hamsters.</p> <p>"Published figure using IL-21 monoclonal antibody (Product # 50-7213-82) in Flow Cytometry"</p> <p>Authors: Lu M,Zhang Y,Dravid P,Li A,Zeng C,Kc M,Trivedi S,Sharma H,Chaiwatpongsakorn S,Zani A,Kenney A,Cai C, Ye C,Liang X,Qiu J,Martinez-Sobrido L,Yount JS,Boyaka PN,Liu SL,Peeples ME,Kapoor A,Li J</p>	<p>Year</p> <p>2021</p>

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