

Product Datasheet

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Anti-Mouse IL-21R (Clone 4A9) Purified *in vivo* GOLD™ Functional Grade Hybridoma Monoclonal Antibody

Product Information

Product No.: I-478
Clone: 4A9
Isotype: Rat IgG2a κ
Storage: Sterile 2-8°C

Product Description

Specificity:

Clone 4A9 activity is directed against murine Interleukin-21 Receptor (CD360).

Antigen Distribution:

IL-21R is expressed on most B cells as well as some T cells and NK cells.

Background:

Interleukin-21 receptor (IL-21R) is a single pass type I membrane protein and a member of the type I cytokine receptor family. It is the receptor for Interleukin-21 (IL-21) and upon binding forms a heterodimer with the common gamma subunit (CD132; IL-2RG). IL-21R and IL-21 are important for the proliferation and differentiation of B cells, T cells, and natural killer cells. They function in survival signalling for antiviral CD8⁺ T cells during chronic infections and induce growth and differentiation of mature B cells in Ig-secreting plasma cells. Additionally, they prevent T cell exhaustion and viral persistence by limiting virus driven Treg cell proliferation¹. IL-21 and IL21-R function as early as the pro-B cell stage, with receptor-mediated signalling increasing as cells mature². When IL-21R binds IL-21, the JAK/STAT transduction pathway is activated.

4A9 was generated by immunizing Lewis rats with IL-21R-transfected YB2/0 and subsequent fusion of immunized spleen cells to SP2/0³. FACS analysis and immunoprecipitation studies show that 4A9 selectively binds to IL-21R. Additionally, 4A9 stains the majority of spleen cells from wild type C57BL/6 mice but not IL-21R deficient mice. IL-21 blocks the binding of 4A9 to IL-21R-transfected YB2/0 cells.

Known Reactivity Species:

Mouse

Format:

in vivo GOLD™, Purified *in vivo* Functional Grade

Immunogen:

Rat YB2/0 hybridoma transfectant cell line expressing truncated IL-21R

Formulation

This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Purity

≥95% monomer by analytical SEC, >95% by SDS Page

Endotoxin

< 1.0 EU/mg as determined by the LAL method

Storage and Stability

Functional grade preclinical antibodies may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C. **Avoid Repeated Freeze Thaw Cycles.**

Products are for research use only. Not for use in diagnostic or therapeutic procedures.

410 Axminister Dr, St. Louis, MO 63026

(800) 538-1145

leincoglobal@leinco.com

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Product Preparation

Functional grade preclinical antibodies are manufactured in an animal free facility using *in vitro* cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Other Applications Reported in Literature:

IP,

FC

Country of Origin

USA

References

1. Schmitz I, Schneider C, Fröhlich A, et al. PLoS Pathog. 9(5):e1003362. 2013.
2. Simard N, Konforte D, Tran AH, et al. J Immunol. 186(9):5244-5253. 2011.

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