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Datasheet for 200-301-MX7

# hFcRn (ADM31) Antibody

## Overview

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|---|---|
| **Description:** | Anti-hFcRn (MOUSE) Monoclonal Antibody - 200-301-MX7 |
| **Item No.:** | 200-301-MX7 |
| **Size:** | 100 µg |
| **Applications:** | ELISA, FC, IF |
| **Reactivity:** | Human |
| **Host Species:** | Mouse |

## Product Details

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| **Background:** | The MHC class I-like Fc receptor (FcRn) functions as an intracellular trafficking receptor, uniquely accountable for prolonging the serum half-life of IgG subclass antibodies and facilitating their passage across cellular barriers. Through these actions, FcRn significantly impacts various aspects of antibody biology and pathobiology. Its crucial role in regulating IgG pharmacokinetics has been exploited in the development of therapeutic antibodies and related biological treatments. Additionally, FcRn is involved in the transport of serum albumin, contributing to the improved pharmacokinetic characteristics of albumin-conjugated therapies. However, a lack of dependable serological tools targeting human FcRn has limited the comprehension of its functions and potential therapeutic uses. |
| **Synonyms:** | FCRN antibody, alpha-chain antibody, FcRn antibody, Fc fragment of IgG receptor and transporter antibody, Fc receptor, IgG, alpha chain transporter antibody, FCGRT antibody, Fcgrt antibody, IgG receptor FcRn large subunit p51, Neonatal Fc receptor, FCGRT |
| **Host Species:** | Mouse |
| **Clonality:** | Monoclonal |
| **Clone ID:** | ADM31 |
| **Format:** | IgG2b |

## Target Details

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| **Gene Name:** | FCGRT |
| **Reactivity:** | Human |

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| **Immunogen:** | Antibodies were generated by immunizing mouse FcRn-deficient mice with spleen cells from mice transgenic for human FcRn. |
| **Purity/Specificity:** | This protein G purified mouse monoclonal antibody was raised via hybridoma and recognizes hFcRn. Antibody isotype IgG2b lambda. |
| **Relevant Links:** | • UniProtKB - P55899<br>• SDS |

## Application Details

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| **Tested Applications:** | ELISA, FC, IF |
| **Application Note:** | This monoclonal anti-hFcRn (ADM31) antibody is unconjugated and is suitable for the detection of FcRn (Fc receptor) in human samples. The FcRn antibody has been tested for Cell ELISA, ELISA, FACS and IF. For each application a titration should be performed to determine the optimal concentration. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **ELISA:** | 1:200 - 1:400 |
| **FC:** | 1.2 µg/10^6 cells |
| **IF:** | User Optimized |

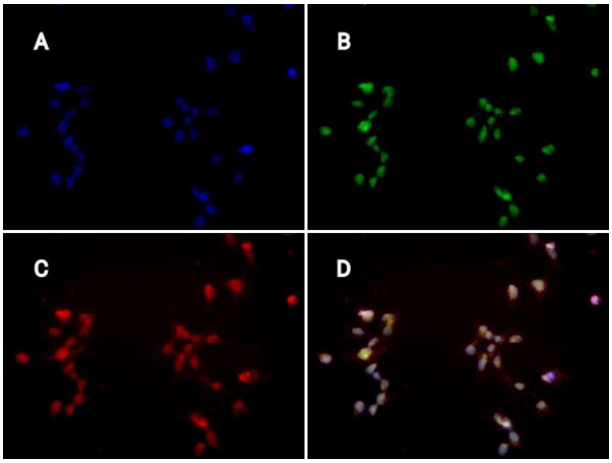
## Formulation

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| **Physical State:** | Liquid (sterile filtered) |
| **Concentration:** | 1.068 mg/mL by UV absorbance at 280 nm |
| **Buffer:** | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 |
| **Stabilizer:** | 50% (v/v) Glycerol |

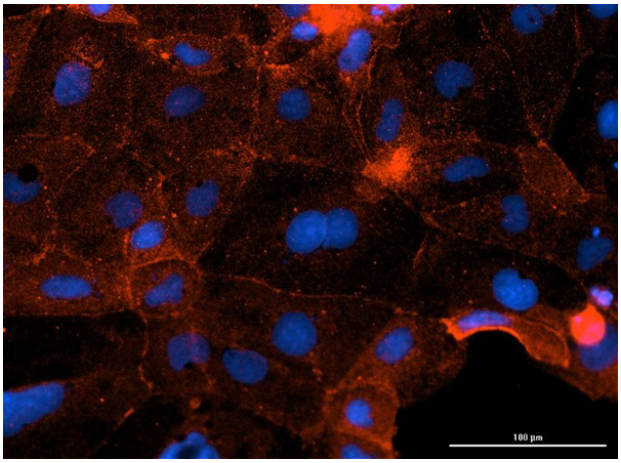
## Shipping & Handling

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| **Shipping Condition:** | Wet Ice |
| **Storage Condition:** | Store vial at 4° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. |
| **Expiration:** | Expiration date is one (1) year from date of receipt. |

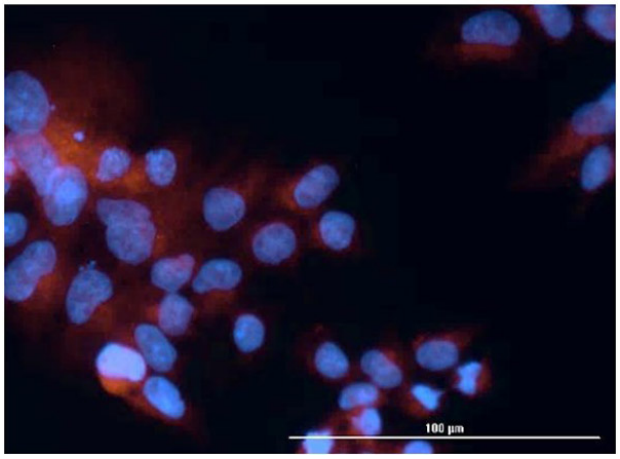
## Images



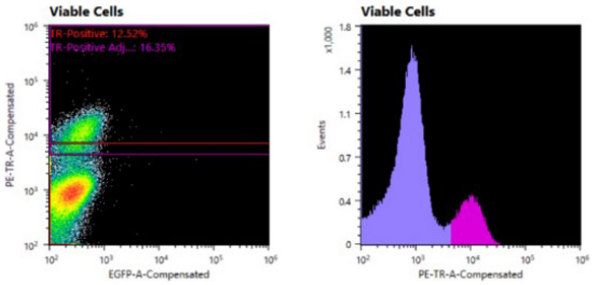

**Immunofluorescence Microscopy**
Immunofluorescence of Mouse Anti-hFcRn (ADM31) Antibody.
Cells: huSSECTM cells overexpressing hFcRn-EGFP.
Primary Antibody: Anti-hFcRn (ADM31) Antibody at 15µg/mL.
Secondary Antibody: Rabbit Anti-Mouse IgG Texas Red Conjugated.
A: DAPI-nuclear counterstain, B: hFcRn-GFP, C: Texas Red anti-FcRn (ADM31), D: merge.



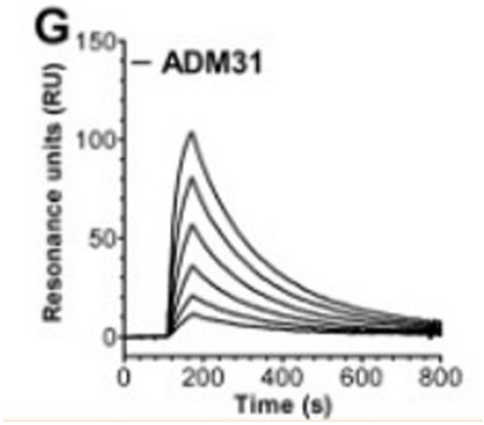

**Immunofluorescence Microscopy**
Immunofluorescence of Mouse Anti-hFcRn (ADM31) Antibody. Cells: HeLa cells. Fixation: Ice Cold Methanol. Permeabilization: Ice Cold Methanol. Primary Antibody: Anti-hFcRn (ADM31) Antibody at 15µg/mL overnight at 4°C. Secondary Antibody: Rabbit Anti-Mouse IgG Texas Red Conjugated (p/n 610-409-C46) at 1:200 for 1hr at room temperature. Nuclear Stain: Hoechst 33342. Location: Cytoplasmic / Cell Membrane. Image Magnification: 20X (With Deconvolution).



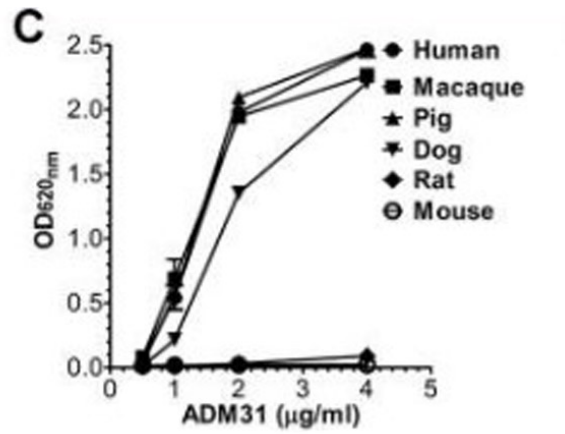

**Immunofluorescence Microscopy**
Immunofluorescence of Mouse Anti-hFcRn (ADM31) Antibody.
Cells: huSSECTM cells.
Fixation: 4% PFA.
Permeabilization: PBS + 0.3% Triton X-100 + 1% goat serum.
Primary Antibody: Anti-hFcRn (ADM31) Antibody at 15µg/mL overnight at 4°C.
Secondary Antibody: Rabbit Anti-Mouse IgG Texas Red Conjugated (p/n 610-409-C46) 1µg/mL for 1hr at room temperature.
Location: Intracellular.




**Flow Cytometry**
Flow Cytometry of Mouse Anti-hFcRn (ADM31) Antibody. Cells: huSSECTM cells.
Primary Antibody: Anti-hFcRn (ADM31) Antibody 1.2µg incubated on ice (4°C) for 60mins.
Secondary Antibody: Rabbit Anti-Mouse IgG Texas Red Conjugated (p/n 610-409-C46) 1.2µg incubated on ice (4°C) for 60mins protected from light.




**ELISA**
Identification of monoclonal Abs that block albumin binding to hFcRn. Representative sensorgrams showing binding of titrated amounts of monomeric hFcRn injected over immobilized ADM31 at pH7.4. Fig 3. PMID: 24764301.




**ELISA**
The monoclonal Abs bind in a species-dependent manner to FcRn. ELISA binding of human, macaque, pig, dog, mouse, and rat FcRn toward ADM31. Fig 5. PMID: 24764301.

## References

- Sand KMK, Dalhus B, Christianson GJ, Bern M, Foss S, Cameron J, Sleep D, Bjoras M, et al. Dissection of the Neonatal Fc Receptor (FcRn)-Albumin Interface Using Mutagenesis and Anti-FcRn Albumin-blocking Antibodies. *J Biol Chem.* (2014)

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