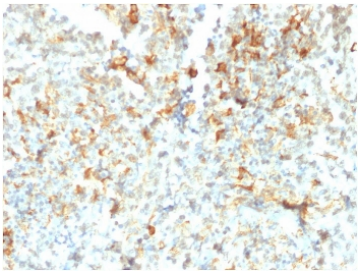
FCGRT Antibody / Neonatal Fc Receptor [clone FCGRT/2932] (V7770)

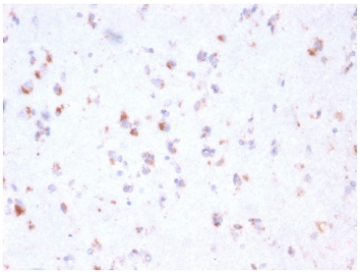
Catalog No.	Formulation	Size
V7770-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7770-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7770SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

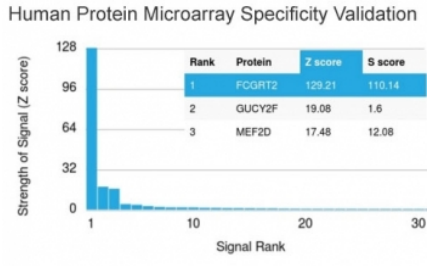
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	FCGRT/2932
Purity	Protein G affinity chromatography
UniProt	P55899
Localization	Cytoplasmic
Applications	2-4ug/ml
Limitations	This FCGRT Antibody / Neonatal Fc Receptor antibody is available for research use only.



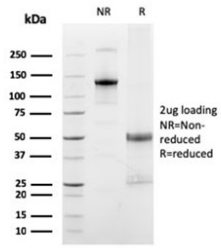
FCGRT Antibody Testicular Cancer IHC. Immunohistochemistry analysis of FFPE human testicular cancer tissue stained with FCGRT Antibody / Neonatal Fc Receptor clone FCGRT/2932 following HIER in pH 9 Tris-EDTA buffer. HRP-DAB brown cytoplasmic and membranous staining is observed in malignant cell populations, consistent with expression of FcRn/FCGRT, an IgG transport receptor involved in antibody recycling, Fc-mediated transport, and regulation of immunoglobulin homeostasis.



FCGRT Antibody Cerebellum IHC. Immunohistochemistry analysis of FFPE human cerebellum tissue stained with FCGRT Antibody / Neonatal Fc Receptor clone FCGRT/2932 following HIER in pH 9 Tris-EDTA buffer. Distinct HRP-DAB brown staining is observed in scattered neural-associated cell populations, consistent with expression of FcRn/FCGRT, a receptor involved in IgG transport, albumin recycling, and Fc-mediated barrier transport biology within neural tissues.



FCGRT Antibody Microarray Specificity Validation. Human protein microarray specificity analysis of more than 19,000 full-length human proteins using FCGRT Antibody / Neonatal Fc Receptor clone FCGRT/2932 demonstrates highly selective binding to FCGRT/FcRn with a Z-score of 129.21 and an S-score of 110.14. Minimal reactivity is observed with unrelated proteins, supporting strong specificity of clone FCGRT/2932 for the neonatal Fc receptor involved in IgG recycling and Fc-mediated transport pathways.



SDS-PAGE analysis of purified, BSA-free FCGRT antibody (clone FCGRT/2932) as confirmation of integrity and purity.

Description

Fc fragment of IgG receptor and transporter (FCGRT), commonly known as the Neonatal Fc receptor or FcRn, is a specialized Fc receptor involved in IgG transport, antibody recycling, and albumin homeostasis. FCGRT Antibody / Neonatal Fc Receptor is useful for studying FcRn-mediated transcytosis, therapeutic antibody pharmacokinetics, IgG half-life regulation, mucosal immunity, and Fc-dependent transport biology. FcRn is broadly expressed in epithelial, endothelial, hematopoietic, and barrier-associated tissues where it regulates intracellular trafficking and recycling of immunoglobulin G and albumin.

FCGRT antibody, also referred to as FcRn antibody, Neonatal Fc receptor antibody, or Fc fragment of IgG receptor and transporter antibody in the literature, recognizes a non-classical major histocompatibility complex class I-related receptor that binds IgG and albumin in a pH-dependent manner. FcRn-mediated recycling protects IgG and albumin from lysosomal degradation and thereby extends their serum half-life. This receptor system is critically important in humoral immunity, passive maternal antibody transfer, therapeutic antibody persistence, and maintenance of circulating albumin concentrations.

FCGRT is expressed in diverse tissue types including placenta, vascular endothelium, intestinal epithelium, liver, kidney, lung, hematopoietic cells, and subsets of neural tissues. The receptor participates in bidirectional transcytosis of IgG across epithelial barriers and contributes to antigen presentation, immune surveillance, and regulation of inflammatory signaling. FcRn additionally plays an important role in biologic drug pharmacology because therapeutic antibody half-life and biodistribution are strongly influenced by FcRn-mediated recycling pathways.

Neonatal Fc receptor biology has become increasingly important in oncology, autoimmune disease, infectious disease, and therapeutic antibody development. Altered FcRn expression or function may influence antibody-based drug responses, inflammatory signaling, tumor microenvironment biology, and mucosal immune regulation. Because FcRn regulates both IgG persistence and albumin metabolism, the receptor has become a major target in translational immunology and biotherapeutic research.

FCGRT is encoded on chromosome 19q13 and produces a transmembrane receptor structurally related to MHC class I proteins. Functional FcRn complexes associate with beta-2 microglobulin and localize primarily to endosomal and vesicular trafficking compartments where pH-dependent IgG binding and recycling occur. The receptor is additionally detected at epithelial and endothelial surfaces involved in Fc-mediated transport pathways.

This mouse monoclonal FCGRT antibody clone FCGRT/2932 has been supported using immunohistochemistry and HuProt protein microarray specificity validation approaches. Immunohistochemistry studies demonstrate endogenous FcRn expression in human cerebellum and testis cancer tissues, while protein microarray analysis supports highly selective recognition of FCGRT/FcRn relative to unrelated protein targets. These data support application of clone FCGRT/2932 in studies investigating IgG transport, Fc-mediated recycling, and therapeutic antibody biology.

Explore additional immune and lymphoid research targets in our Immunology Antibodies page featuring markers involved in B-cell signaling, germinal center biology, adaptive immunity, and hematologic disease research.

Application Notes

Optimal dilution of the FCGRT Antibody / Neonatal Fc Receptor should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 24-215) was used as the immunogen for the FCGRT antibody.

Storage

Store the FCGRT antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

FcRn antibody, Neonatal Fc receptor antibody, Fc fragment of IgG receptor and transporter antibody, IgG recycling receptor antibody, FCGRT immune transport receptor antibody

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