

FcRn (M-255): sc-66893

BACKGROUND

FcRn present in the intestinal epithelium of neonatal mice and rats mediates the selective uptake of immunoglobulin G (IgG) in mothers' milk, thereby helping newborn animals to acquire passive immunity. FcRn (also designated FCGRT, Brambell receptor, FcRn α chain, IgG Gc receptor and neonatal Fc receptor) is comprised of a heavy chain and β -2-Microglobulin. FcRn heavy chain shows approximately 35% amino acid identity to an MHC class I molecule. FcRn localizes in endosomes of vascular endothelial cells and selectively recycles IgG to the cell surface, thus protecting IgG from lysosomal catabolism. This protection mechanism is a major constituent for ensuring IgG are the longest lived of all plasma proteins.

REFERENCES

1. Detmer, S.A., et al. 2002. IgG transcytosis and recycling by FcRn expressed in MDCK cells reveals ligand-induced redistribution. *EMBO J.* 21: 5953.
2. Claypool, S.M., et al. 2002. Functional reconstitution of human FcRn in Madin-Darby canine kidney cells requires co-expressed human β -2-microglobulin. *J. Biol. Chem.* 277: 28038-28050.
3. Praetor, A., et al. 2002. Membrane-anchored human FcRn can oligomerize in the absence of IgG. *J. Mol. Biol.* 321: 277-284.

CHROMOSOMAL LOCATION

Genetic locus: FCGRT (human) mapping to 19q13.33; Fcgrt (mouse) mapping to 7 B4.

SOURCE

FcRn (M-255) is a rabbit polyclonal antibody raised against amino acids 22-276 mapping within an N-terminal extracellular domain of FcRn of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

FcRn (M-255) is recommended for detection of FcRn of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FcRn siRNA (h): sc-45632, FcRn siRNA (m): sc-45633, FcRn shRNA Plasmid (h): sc-45632-SH, FcRn shRNA Plasmid (m): sc-45633-SH, FcRn shRNA (h) Lentiviral Particles: sc-45632-V and FcRn shRNA (m) Lentiviral Particles: sc-45633-V.

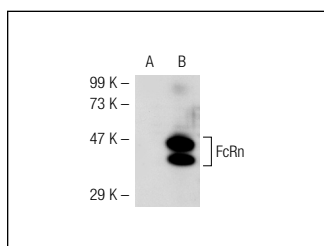
Molecular Weight of FcRn: 46 kDa.

Positive Controls: FcRn (m): 293T Lysate: sc-126843.

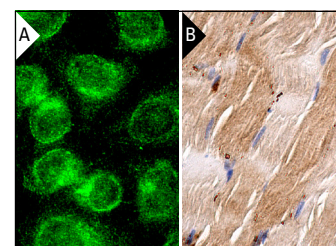
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



FcRn (M-255): sc-66893. Western blot analysis of FcRn expression in non-transfected: sc-117752 (A) and mouse FcRn transfected: sc-126843 (B) 293T whole cell lysates.



FcRn (M-255): sc-66893. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (B).

SELECT PRODUCT CITATIONS

1. Powner, M.B., et al. 2014. Expression of neonatal Fc receptor in the eye. *Invest. Ophthalmol. Vis. Sci.* 55: 1607-1615.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **FcRn (A-6): sc-393064** or **FcRn (B-8): sc-271745**, our highly recommended monoclonal alternatives to FcRn (M-255). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **FcRn (A-6): sc-393064**.