

## FCRN Protein, Mouse (HEK293, His)

Cat. No.:	HY-P70656
Synonyms:	IgG receptor FcRn; Neonatal Fc receptor; FCRN
Species:	Mouse
Source:	HEK293
Accession:	Q61559 (Ser22-Val301)&P01887 (Ile21-Met119)
Gene ID:	14132&12010
Molecular Weight:	42-58&12 kDa

### PROPERTIES

#### AA Sequence

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S E T R P P L M Y H   L T A V S N P S T G   L P S F W A T G W L   G P Q Q Y L T Y N S
L R Q E A D P C G A   W M W E N Q V S W Y   W E K E T T D L K S   K E Q L F L E A L K
T L E K I L N G T Y   T L Q G L L G C E L   A S D N S S V P T A   V F A L N G E E F M
K F N P R I G N W T   G E W P E T E I V A   N L W M K Q P D A A   R K E S E F L L N S
C P E R L L G H L E   R G R R N L E W K E   P P S M R L K A R P   G N S G S S V L T C
A A F S F Y P P E L   K F R F L R N G L A   S G S G N C S T G P   N G D G S F H A W S
L L E V K R G D E H   H Y Q C Q V E H E G   L A Q P L T V D L D   S S A R S S V P V V
& :
I Q K T P Q I Q V Y   S R H P P E N G K P   N I L N C Y V T Q F   H P P H I E I Q M L
K N G K K I P K V E   M S D M S F S K D W   S F Y I L A H T E F   T P T E T D T Y A C
R V K H A S M A E P   K T V Y W D R D M

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**Appearance** Lyophilized powder.

**Formulation** Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.

**Endotoxin Level** <1 EU/µg, determined by LAL method.

**Reconstitution** It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH<sub>2</sub>O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

**Storage & Stability** Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

**Shipping** Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

**Background** FCRN, a vital cell surface receptor, facilitates the transfer of passive humoral immunity from the mother to the newborn.

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Recognizing the Fc region of monomeric immunoglobulin gamma, it selectively uptakes IgG from milk, particularly at the apical surface of the intestinal epithelium. The resultant FcRn-IgG complexes undergo transcytosis across the intestinal epithelium, releasing IgG from FcRn into blood or tissue fluids. This process contributes significantly to effective humoral immunity by recycling IgG and extending its half-life in the circulation. Mechanistically, monomeric IgG binding to FcRn in acidic endosomes of endothelial and hematopoietic cells facilitates the recycling of IgG to the cell surface, releasing it into circulation. Notably, besides its role in IgG homeostasis, the FcRn complex, consisting of two subunits, p51, and p14 (equivalent to beta-2-microglobulin), forms an MHC class I-like heterodimer, highlighting its pivotal role in immune and protein homeostasis. Furthermore, FCRN interacts with albumin/ALB, regulating the homeostasis of this other most abundant circulating protein.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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