

FCGRT-B2M Heterodimer Protein, Mouse (Biotinylated, HEK293, His)

Cat. No.:	HY-P75200
Synonyms:	FCGRT-B2M Heterodimer Protein; IgG receptor FcRn large subunit p51; Beta-2-microglobulin
Species:	Mouse
Source:	HEK293
Accession:	Q61559 (S22-S297)&P01887 (A21-M119,A105D)
Gene ID:	14132&12010
Molecular Weight:	Approximately 44.2 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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 ₂ O.
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	<p>FCRN, a vital cell surface receptor, facilitates the transfer of passive humoral immunity from the mother to the newborn. 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.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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