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

Cat. No.:	HY-P701255
Synonyms:	FcRn alpha chain; FCGRT; FCRN; FCGRT&B2M
Species:	Human
Source:	HEK293
Accession:	P55899 (A24-S297)&P61769 (I21-M119)
Gene ID:	2217&567
Molecular Weight:	Approximately 33 kDa(FCGRT)&13 kDa(B2M)

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from 0.22 μm filtered solution of PBS, pH7.4 with trehalose as protectant.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	FCGRT, a crucial cell surface receptor, facilitates the transfer of passive humoral immunity from the mother to the newborn by binding to the Fc region of monomeric immunoglobulin gamma and selectively mediating its uptake from milk. The process involves IgG binding at the apical surface of the intestinal epithelium, forming FcRn-IgG complexes that transcytose across the intestinal epithelium, releasing IgG into blood or tissue fluids. Beyond infancy, FCGRT plays a pivotal role in effective humoral immunity by recycling IgG and prolonging its half-life in the circulation. Mechanistically, the binding of monomeric IgG to FCGRT in acidic endosomes of endothelial and hematopoietic cells facilitates the recycling of IgG to the cell surface, subsequently releasing it into circulation. Additionally, FCGRT regulates the homeostasis of albumin/ALB, the other most abundant circulating protein, further underscoring its essential role in immune and protein homeostasis. In the context of microbial infection, FCGRT acts as an uncoating receptor for various echoviruses, including Echovirus 5, 6, 7, 9, 11, 13, 25, and 29.

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