FCGRT-B2M Heterodimer Protein, Cynomolgus (Biotinylated, His-Avi)

Cat. No.:	HY-P76919
Synonyms:	FCGRT-B2M Heterodimer Protein; IgG receptor FcRn large subunit p51; Beta-2-microglobulin
Species:	Cynomolgus
Source:	HEK293
Accession:	Q8SPV9 (A24-S297)&Q8SPW0 (I21-M119)
Gene ID:	102128913&101867173
Molecular Weight:	Approximately 33.7&11.6 kDa.

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. 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.
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	The FCGRT protein is a cell surface receptor that plays a critical role in transferring passive humoral immunity from the mother to the newborn. It accomplishes this by binding to the Fc region of monomeric immunoglobulin gamma and facilitating its selective uptake from milk. Within the intestinal epithelium, the FCGRT-B2M heterodimer binds to IgG at the apical surface, forming FcRn-IgG complexes that are transcytosed across the epithelium, releasing IgG into the bloodstream or tissue fluids. This receptor continues to contribute to effective humoral immunity throughout life by recycling IgG and prolonging its half-life in circulation. Mechanistically, the binding of monomeric IgG to FCGRT-B2M in acidic endosomes of endothelial and hematopoietic cells enables the recycling of IgG to the cell surface for release into the circulation. Additionally, the FCGRT-B2M heterodimer plays a role in regulating the homeostasis of albumin, the most abundant circulating protein, by interacting with it. The FCGRT-B2M complex consists of two subunits, p51 and p14 (equivalent to beta-2-microglobulin), forming an MHC class I-like heterodimer.

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

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