FCGRT-B2M Heterodimer Protein, Rat (HEK293, His, solution)

Cat. No.:	HY-P75760
Synonyms:	FCGRT-B2M Heterodimer Protein; IgG receptor FcRn large subunit p51; Beta-2-microglobulin
Species:	Rat
Source:	HEK293
Accession:	P13599 (A23-S298)&P07151 (I21-M119)
Gene ID:	29558&24223
Molecular Weight:	Approximately 35&12 kDa

PROPERTIES

Appearance	Solution
Formulation	Supplied as a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	The FCGRT-B2M heterodimer protein serves as a crucial cell surface receptor facilitating 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 formed 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 FCGRT-B2M heterodimer also regulates the homeostasis of another abundant circulating protein, albumin/ALB, through interactions with albumin. 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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA