Recombinant FCGRN protein (His tag)

Catalog Number	547094
Synonyms	FcRn; IgG Fc fragment receptor transporter alpha chain; Neonatal Fc receptor
Species	Human
Expression System	E. coli
Accession	P55899
Molecular Weight	Predictes a molecular mass of 32.03 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 32 kDa band.

Product Information

Sequence Region	24-297
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 24-297 aa (P55899) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	This recombinant protein represents a fragment of the human IgG receptor FcRn large subunit p51 (FcRn), encompassing amino acids 24-297. It includes the complete Ig-like C1-type functional domain, making it an ideal tool for investigating the specific mechanisms of IgG transport, recycling, and humoral immunity regulation. The full-length FcRn protein, encoded by the FCGRT gene, is a cell surface and endosome membrane receptor critical for transferring passive humoral immunity from mother to newborn by binding to the Fc region of monomeric immunoglobulin gamma and mediating its selective uptake from milk. Throughout life, FcRn contributes to effective humoral immunity by recycling IgG and extending its half-life in the circulation, as well as regulating the homeostasis of albumin. Additionally, it functions as an uncoating receptor for several echoviruses, highlighting its role in microbial infection. The protein is localized to the cell membrane as a single-pass type I membrane protein and is also found in the endosome membrane, where it facilitates IgG transcytosis and recycling processes.