

FCGRT Protein, Human (GST)

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| Cat. No.: | HY-P72192 |
| Synonyms: | Alpha chain; Fc fragment of IgG; receptor transporter; alpha; FCGRN_HUMAN; FCGRT; FcRn alpha chain; FcRn; FCRN; alpha chain; IgG Fc fragment receptor transporter alpha chain; IgG Gc receptor; IgG receptor FcRn large subunit p51; IgG receptor FcRn large subunit p51 precursor; Immunoglobulin receptor; intestinal; heavy chain; Neonatal Fc receptor |
| Species: | Human |
| Source: | E. coli |
| Accession: | P55899 (A24-S297) |
| Gene ID: | 2217 |
| Molecular Weight: | Approximately 57.4 kDa |

PROPERTIES

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| AA Sequence | <pre> A E S H L S L L Y H L T A V S S P A P G T P A F W V S G W L G P Q Q Y L S Y N S L R G E A E P C G A W V W E N Q V S W Y W E K E T T D L R I K E K L F L E A F K A L G G K G P Y T L Q G L L G C E L G P D N T S V P T A K F A L N G E E F M N F D L K Q G T W G G D W P E A L A I S Q R W Q Q Q D K A A N K E L T F L L F S C P H R L R E H L E R G R G N L E W K E P P S M R L K A R P S S P G F S V L T C S A F S F Y P P E L Q L R F L R N G L A A G T G Q G D F G P N S D G S F H A S S S L T V K S G D E H H Y C C I V Q H A G L A Q P L R V E L E S P A K S S </pre> |
| Appearance | Lyophilized powder. |
| Formulation | Lyophilized from a 0.2 µm sterile filtered PBS, 6% Trehalose, pH 7.4 |
| 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

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| 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 |
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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.

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

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