

Vitamin D-binding protein/GC Protein, Human (HEK293, His)

Cat. No.:	HY-P71068
Synonyms:	Vitamin D-Binding Protein; DBP; VDB; Gc-Globulin; Group-Specific Component; GC
Species:	Human
Source:	HEK293
Accession:	P02774 (L17-L474)
Gene ID:	2638
Molecular Weight:	Approximately 53.0 kDa

PROPERTIES

AA Sequence	<p> L E R G R D Y E K N K V C K E F S H L G K E D F T S L S L V L Y S R K F P S G T F E Q V S Q L V K E V V S L T E A C C A E G A D P D C Y D T R T S A L S A K S C E S N S P F P V H P G T A E C C T K E G L E R K L C M A A L K H Q P Q E F P T Y V E P T N D E I C E A F R K D P K E Y A N Q F M W E Y S T N Y G Q A P L S L L V S Y T K S Y L S M V G S C C T S A S P T V C F L K E R L Q L K H L S L L T T L S N R V C S Q Y A A Y G E K K S R L S N L I K L A Q K V P T A D L E D V L P L A E D I T N I L S K C C E S A S E D C M A K E L P E H T V K L C D N L S T K N S K F E D C C Q E K T A M D V F V C T Y F M P A A Q L P E L P D V E L P T N K D V C D P G N T K V M D K Y T F E L S R R T H L P E V F L S K V L E P T L K S L G E C C D V E D S T T C F N A K G P L L K K E L S S F I D K G Q E L C A D Y S E N T F T E Y K K K L A E R L K A K L P D A T P T E L A K L V N K H S D F A S N C C S I N S P P L Y C D S E I D A E L K N I L </p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, 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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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

Vitamin D-binding protein (GC Protein) is a multifunctional protein engaged in various physiological processes. It plays a pivotal role in the transport and storage of vitamin D, contributing to its systemic availability. Furthermore, GC Protein acts as a scavenger for extracellular G-actin, a crucial function in maintaining cellular homeostasis. In the context of inflammation, it enhances the chemotactic activity of C5 alpha for neutrophils, actively participating in immune responses. Additionally, GC Protein is implicated in macrophage activation, contributing to the orchestration of immune processes. Beyond its immune-related functions, GC Protein associates with membrane-bound immunoglobulin on B-lymphocytes and interacts with the IgG Fc receptor on T-lymphocyte membranes, suggesting its involvement in immune cell interactions. Notably, the interaction with LRP2 is essential for the renal uptake of GC in complex with 25-hydroxyvitamin D3, highlighting its significance in vitamin D metabolism and homeostasis.

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

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