

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

Cat. No.:	HY-P72202
Synonyms:	DBP; DBP/GC; GC; Gc globulin; Gc-globulin; GRD3; Group specific component; Group specific component vitamin D binding protein; Group-specific component; hDBP; VDB; VDBG; VDBP; Vitamin D binding alpha globulin; Vitamin D-binding protein; VTDB_HUMAN
Species:	Human
Source:	E. coli
Accession:	P02774 (R19-L474)
Gene ID:	2638
Molecular Weight:	Approximately 55 kDa

PROPERTIES

AA Sequence

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RGRDYEKKNKV   CKEFSLHKGKE   DFTSLSLVLY   SRKFPSGTFE
QVSQLVKEVV    SLTEACCAEG   ADPDCYDTRT   SALSAKSCES
NSPFPVHPGT    AECCTKEGLE   RKL CMAALKH   QPQEFPTYVE
PTNDEICEAF    RKDPKEYANQ   FMWEYSTNYG   QAPLSLLVSY
TKSYLSMVG S    CCTSASPTVC   FLKERLQLKH   LSLLTTL SNR
VCSQYAAAYGE   KKSRLSNLIK   LAQKVPTADL   EDVLP LAEDI
TNILSKCCES    ASED CMAKEL   PEHTVKLCDN   LSTKNSKFED
CCQEK TAMDV   FVCTYFMPAA   QLPELPDVEL   PTNKDVC DPG
NTKVM DKYTF   ELSRRTHLPE   VFLSKVLEPT   LKSLGEC CDV
EDSTTCFNAK    GPLLKKELSS   FIDKGQELCA   DYS ENTFTEY
KKKLAERLKA    KLPDATPTEL   AKLVNKH SDF   ASNCCSINSP
PLYCDSEIDA    ELKNIL
  
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Appearance

Lyophilized powder.

Formulation

Lyophilized from a 0.2 µm solution of Tris-based buffer, 50% Glycerol.

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 ddH₂O.

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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