

Human SerpinA6 / CBG Protein (His Tag)

Catalog Number: 10998-H08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

CBG; AI265318; AV104445; Cbg

Protein Construction:

A DNA sequence encoding the human SERPINA6 (NP_001747.2) precursor (Met 1-Val 405) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 98 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met 23

Molecular Mass:

The secreted recombinant human SERPINA6 consists of 394 amino acids and predicts a molecular mass of 44 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of the protein is approximately 55-60 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

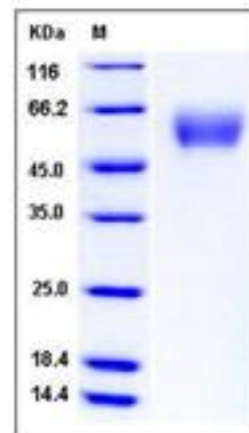
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Corticosteroid-binding globulin (CBG), also known as SerpinA6, is a non-inhibitory member of the serine proteinase inhibitor (serpin) superfamily. It is the high-affinity transport protein for glucocorticoids in vertebrate blood. CBG is specifically cleaved by this protease at a precise site close to its carboxy-terminus. This induces a conformation change and disrupts the binding between glucocorticoids and CBG, and promotes a significant and local release of glucocorticoids (over 90% of them are bound to CBG in human plasma). In this context, CBG directs glucocorticoids to sites of inflammation, and plays in consequence a crucial role in efficient glucocorticoid action in physiology. The SerpinA6 protein is mainly secreted by the liver. This negative acute phase protein regulates free cortisol levels in the blood and distributes cortisol to its target tissues. SerpinA6 deficiency is an extremely rare hereditary disorder characterized by reduced corticosteroid-binding capacity with normal or low plasma corticosteroid-binding globulin concentration, and normal or low basal cortisol levels associated with hypo-/hypertension and muscle fatigue. There are three heritable, human CBG gene mutations that can reduce CBG-cortisol binding affinity and/or reduce circulating CBG levels.

References

1. Seralini GE. (1991) A new role for corticosteroid binding globulin (CBG), member of SERPIN superfamily. C R Seances Soc Biol Fil. 185(6): 500-9.
2. Buss C, *et al.* (2007) Haploinsufficiency of the SERPINA6 gene is associated with severe muscle fatigue: A de novo mutation in corticosteroid-binding globulin deficiency. J Neural Transm. 114(5): 563-9.
3. Torpy DJ, *et al.* (2007) Corticosteroid-binding globulin gene polymorphisms: clinical implications and links to idiopathic chronic fatigue disorders. Clin Endocrinol (Oxf). 67(2): 161-7.

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