

Human CUTC / CGI-32 Protein (His Tag)

Catalog Number: 11470-H07E



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Biological Solution Specialist

General Information

Gene Name Synonym:

CGI-32; 2310039I18Rik; AI326282; CGI-32

Protein Construction:

A DNA sequence encoding the human CUTC (Q9NTM9) (Met 1-Val 273) was expressed, with an N-terminal polyhistidine tag.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

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

Predicted N terminal: Met

Molecular Mass:

The recombinant human CUTC comprises 284 amino acids and migrates as an approximately 31 kDa band as predicted in SDS-PAGE under reducing conditions

Formulation:

Lyophilized from sterile PBS, 10% glycerol, 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:

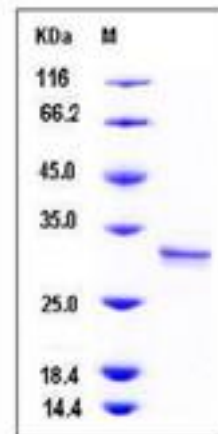
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Copper homeostasis protein cutC homolog, also known as CGI-32 and CUTC, is a cytoplasm and nucleus protein which belongs to the CutC family. CUTC may play a role in copper homeostasis. It can bind one Cu¹⁺ per subunit. Copper is an essential trace element to life and particularly plays a pivotal role in the physiology of aerobic organisms. Copper is a micronutrient that is required for proper metabolic functioning of most prokaryotic and eukaryotic organisms. To sustain an adequate supply of copper, a cell requires molecular mechanisms that control the metal content to avoid copper toxicity. This toxicity comes primarily from the reactivity of copper, which can lead to the generation of free radicals. In bacteria, two independent systems are responsible for maintaining the balance of copper within the cells (Cop and Cut family proteins). The Cut protein family is associated with copper homeostasis and involved in uptake, storage, delivery, and efflux of copper. CutC is a member of the Cut family and is suggested to be involved in efflux trafficking of cuprous ion. CutC is able to respond transcriptionally to copper and to participate in the control of copper homeostasis in E. faecalis.

References

- 1.Lai C.-H., et al., 2000, Genome Res.10:703-713.
- 2.Li J., et al., 2005, Biochem. Biophys. Res. Commun. 337:179-183.
- 3.Li,Y. et al., 2010, J Struct Biol. 169 (3):399-405.

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