



Recombinant Protein Technical Manual  
Recombinant Human CUTC/CGI-32 Protein (His Tag)  
RPES1274

### Product Data:

**Product SKU:** RPES1274

**Size:** 20µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** Q9NTM9

### Protein Information:

**Molecular Mass:** 31 kDa

**AP Molecular Mass:** 31 kDa

**Tag:** N-His

**Bio-activity:**

**Purity:** > 92 % as determined by reducing SDS-PAGE.

**Endotoxin:** Please contact us for more information.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, 10% glycerol, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** CGI-32

## Immunogen Information:

**Sequence:** Met 1-Val 273

## Background:

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 Cu<sup>1+</sup> 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*.