

# Human CANT1 Protein (His Tag)

Catalog Number: 13124-H07H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

DBQD; SCAN-1; SCAN1; SHAPY

### Protein Construction:

A DNA sequence encoding the human CANT1 (Q8WVQ1-1) extracellular domain (Gly 80-Ile 401) was fused with polyhistidine tag at the N-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 88 % as determined by SDS-PAGE

### Endotoxin:

< 1.0 EU per  $\mu$ g 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:** His

### Molecular Mass:

The recombinant human CANT1 consists of 342 amino acids and has a calculated molecular mass of 38 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh CANT1 is approximately 40kDa.

### 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:

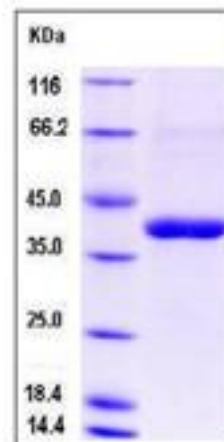
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

CANT1 (calcium activated nucleotidase 1) belongs to the apyrase family. Apyrase is a calcium-activated plasma membrane-bound enzyme (magnesium can also activate it) (EC 3.6.1.5) that catalyses the hydrolysis of ATP to yield AMP and inorganic phosphate. Two isoenzymes are found in commercial preparations from *S. tuberosum*. One with a higher ratio of substrate selectivity for ATP: ADP and another with no selectivity. It can also act on ADP and other nucleoside triphosphates and diphosphates with the general reaction being  $NTP \rightarrow NDP + Pi \rightarrow NMP + 2Pi$ . The salivary apyrases of blood-feeding arthropods are nucleotide hydrolysing enzymes are implicated in the inhibition of host platelet aggregation through the hydrolysis of extracellular adenosine diphosphate. CANT1 functions as a calcium-dependent nucleotidase with a preference for UDP. Defects in CANT1 are the cause of desbuquois dysplasia.

## References

1. Failer BU, *et al.* (2002) Cloning, expression, and functional characterization of a  $Ca^{2+}$ -dependent endoplasmic reticulum nucleoside diphosphatase. *J Biol Chem.* 277(40):36978-86.
2. Smith TM, *et al.* (2002) Cloning, expression, and characterization of a soluble calcium-activated nucleotidase, a human enzyme belonging to a new family of extracellular nucleotidases. *Arch Biochem Biophys.* 406(1):105-15.
3. Strausberg RL, *et al.* (2003) Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. *Proc Natl Acad Sci.* 99(26):16899-903.

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