

# Human CD1B / CD1A Protein (Fc Tag)

Catalog Number: 11831-H02H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CD1; CD1A; CD1B; R1

### Protein Construction:

A DNA sequence encoding the human CD1B (NP\_001755) (Met1-Ser 303) was expressed, fused with the Fc region of human IgG1 at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 88 % 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:** Ser 18

### Molecular Mass:

The recombinant human CD1B /Fc is a disulfide-linked homodimer. The reduced monomer comprises 527 amino acids and has a predicted molecular mass of 58.6 kDa. The apparent molecular mass of the protein is approximately 59-69 kDa in SDS-PAGE under reducing conditions.

### 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:

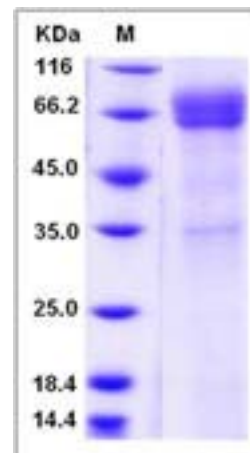
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

CD1B contains 1 Ig-like (immunoglobulin-like) domain and belongs to the CD1 family. CD1 family members are transmembrane glycoproteins, which are structurally related to the major histocompatibility complex (MHC) proteins and form heterodimers with beta-2-microglobulin. During protein synthesis and maturation, they bind endogenous lipids that are replaced by lipid or glycolipid antigens when the proteins are internalized and pass through endosomes, before trafficking back to the cell surface. CD1B localizes to late endosomes and lysosomes via a tyrosine-based motif in the cytoplasmic tail, and requires vesicular acidification to bind lipid antigens. It is expressed on cortical thymocytes, epidermal Langerhans cells, dendritic cells, on certain T-cell leukemias, and in various other tissues. CD1B is an antigen-presenting protein that binds self and non-self lipid and glycolipid antigens and presents them to T-cell receptors on natural killer T-cells.

## References

1.Coventry B, *et al.* (2004) CD1a in human cancers: a new role for an old molecule. *Trends Immunol.* 25 (5):242-8. 2.Martin LH, *et al.* (1988) Structure and expression of the human thymocyte antigens CD1a, CD1b, and CD1c. *Proc Natl Acad Sci.* 84(24):9189-93. 3.Aruffo A, *et al.* (1989) Expression of cDNA clones encoding the thymocyte antigens CD1a, b, c demonstrates a hierarchy of exclusion in fibroblasts. *J Immunol.* 143(5):1723-30.

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