

# Human CLEC7A / Dectin-1 / CLECSF12 Protein (Fc Tag)

Catalog Number: 10215-H01H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

BGR; CANDF4; CLECSF12; DECTIN1

### Protein Construction:

A DNA sequence encoding the human Dectin1 (NP\_072092.2) (Thr 66-Met201) was expressed with the Fc region of human IgG1 at the N-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** ≥ 85 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.

### 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:** Glu

### Molecular Mass:

The recombinant human Dectin1/Fc comprises 373 amino acids and has a predicted molecular mass of 42.1 kDa. The apparent molecular mass of the protein is approximately 44 kDa in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.4, 5% Glycerol.

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:

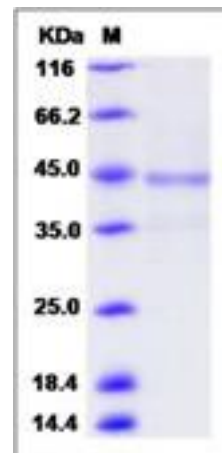
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Dectin-1 was recently identified as the most important receptor for beta-glucan. It is a type II transmembrane protein which binds beta-1,3 and beta-1,6 glucans, and is expressed on most cells of the innate immune system and has been implicated in phagocytosis as well as killing of fungi by macrophages, neutrophils and dendritic cells. Recognition of beta-glucan by dectin-1 triggers effective immune response, including phagocytosis and proinflammatory factor production, to eliminate infecting fungi, which especially benefits immunocompromised patients against opportunistic fungal infection. In addition, dectin-1 is involved in the adaptive immune response as well as autoimmune diseases and immune tolerance. Dectin-1 can recognize and respond to live fungal pathogens and is being increasingly appreciated as having a key role in the innate responses to these pathogens. In addition to its exogenous ligands, Dectin-1 can recognize an unidentified endogenous ligand on T cells and may act as a co-stimulatory molecule. Recent studies have highlighted the importance of Dectin-1 in anti-fungal immunity, in both mice and humans, and have suggested a possible involvement of this receptor in the control of mycobacterial infections.

## References

- 1.Herre J, *et al.* (2004) The role of Dectin-1 in antifungal immunity. *Crit Rev Immunol.* 24(3): 193-203.
- 2.Brown GD. (2006) Dectin-1: a signalling non-TLR pattern-recognition receptor. *6(1): 33-43.*
- 3.Sun L, *et al.* (2007) The biological role of dectin-1 in immune response. *Int Rev Immunol.* 26(5-6): 349-64.

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