

Dectin-2 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Nkcl;Clec4n;Clecsf10;C-type lectin domain family 6 member A
Protein Construction:	A DNA sequence encoding the mouse CLEC4N (NP_064385.1) extracellular domain (Ile 44-Leu 209) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Ile 44
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q3V2N1
Molecular Weight:	20.9 kDa (predicted); 23 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:
It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:
In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

C-type lectin domain family 4 member N (CLEC4N), also known as Dectin-2, is a C-type lectin expressed by dendritic cells (DCs) and macrophages. Members of the C-type lectin domain (CTLD) superfamily are metazoan proteins functionally important in glycoprotein metabolism, mechanisms of multicellular integration and immunity. They share a common fold and are involved in a variety of functions, such as generalized defense mechanisms against foreign agents, discrimination between healthy and pathogen-infected cells, and

endocytosis and blood coagulation. Genome-level studies on human, elegans and melanogaster demonstrated almost complete divergence among invertebrate and mammalian families of CTLD-containing proteins (CTLDcps). The vertebrate CTLDcp family was essentially formed early in vertebrate evolution and is completely different from the invertebrate families. The composition of the CTLDcp superfamily in fish and mammals suggests that large scale duplication events played an important role in the evolution of vertebrates. Dectin-2 is important in host defense against *C. albicans* by inducing Th17 cell differentiation. Dectin-2 constitutes a major fungal pattern recognition receptor (PRR) that can couple to the Syk-CARD9 innate signaling pathway to activate DCs and regulate adaptive immune responses to fungal infection.

Reference

Robinson MJ, et al. (2009) Dectin-2 is a Syk-coupled pattern recognition receptor crucial for Th17 responses to fungal infection. *J Exp Med.* 206(9): 2037-51.

Saijo S, et al. (2010) Dectin-2 recognition of alpha-mannans and induction of Th17 cell differentiation is essential for host defense against *Candida albicans*. *Immunity.* 32(5): 681-91.

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