Data Sheet (Cat.No.TMPY-03475)

TargetMol

CLEC4A3 Protein, Rat, Recombinant (hFc)

General Information

Synonyms:	C-type lectin domain family 4, member a3;CLEC4A3
Protein Construction:	A DNA sequence encoding the rat CLEC4A3(Q5YIS0) (Leu68-Leu237) was expressed with Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	Q5YIS0
Molecular Weight:	48.3 kDa (predicted); 58 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:	> 85 % 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

CLEC4A3 contains 1 C-type lectin domain and belongs to the C-type lectin-like domain-containing (CLEC) family. Lectins are proteins that are able to recognize and bind with specific carbohydrate molecules. C-type lectins are an important group of proteins found in the immune system of animals. These lectins are named C-type because of their calcium dependent carbohydrate recognition domain (CRD). In the immune system, C-type lectins act as recognition molecules by binding to foreign microorganisms. They also promote the movement and selective

adhesion of white blood cells. The C-type lectin has a three-dimensional fold, the CRD, in which calcium ions contribute to the lectin's ability to recognize and bind carbohydrates. In the immune system, carbohydrate recognition contributes to the ability of immune cells to move from one area of the body to another. It also allows immune cells to identify and discriminate between proteins that belong to the host and those that belong to foreign organisms. There are a number of different C-type lectin subfamilies, including collectins, selectins, proteoglycans, and lymphocyte lectins.

Reference

Gibbs RA, et al. (2004) Genome sequence of the Brown Norway rat yields insights into mammalian evolution. Nature. 428:493-521.

Carninci P, et al. (1999) High-efficiency full-length cDNA cloning. Methods Enzymol. 303:19-44.

Shibata K, et al. (2000) RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10:1757-71.

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