Data Sheet (Cat.No.TMPY-03774)

TargetMol

COLEC12 Protein, Rhesus, Recombinant (His)

General Information

Synonyms:	collectin sub-family member 12
Protein Construction:	A DNA sequence encoding the rhesus COLEC12 (F6RUR9) (Ala37-Leu678) was expressed with a polyhistide tag at the N-terminus. Predicted N terminal: His
Species:	Rhesus
Expression Host:	Baculovirus Insect Cells
Accession:	F6RUR9
Molecular Weight:	72.3 kDa (predicted)

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:	> 95 % 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 20 mM Tris, 500 mM NaCl, 10% glycerol, 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

CLP1, also known as COLEC12, is a scavenger receptor that displays several functions associated with host defense. It contains 1 C-type lectin domain and 3 collagen-like domains. CLP1 is strongly expressed in placenta and moderately expressed in heart, skeletal muscle, small intestine and lung. It promotes binding and phagocytosis of Gram-positive, Gram-negative bacteria and yeast. CLP1 mediates the recognition, internalization and degradation of oxidatively modified low density lipoprotein (oxLDL) by vascular endothelial cells. It binds to

several carbohydrates including Gal-type ligands, D-galactose, L- and D-fucose, GalNAc, T and Tn antigens in a calcium-dependent manner and internalizes specifically GalNAc in nurse-like cells. It binds also to sialyl Lewis X or a trisaccharide and asialo-orosomucoid (ASOR). CLP1 may also play a role in the clearance of amyloid beta in Alzheimer disease.

Reference

Ramirez A,et al.(2008) Human RNA 5'-kinase (hClp1) can function as a tRNA splicing enzyme in vivo. RNA. 14(9): 1737-45.

Danielsen JM,et al.. (2011) Mass spectrometric analysis of lysine ubiquitylation reveals promiscuity at site level. Mol Cell Proteomics. 10(3):M110.003590.

Kim W,et al.(2011) Systematic and quantitative assessment of the ubiquitin-modified proteome. Mol Cell. 44(2): 325-40.