Data Sheet (Cat.No.TMPK-01205)

TargetMol

MDL-1/CLEC5A Protein, Human, Recombinant (hFc)

General Information

Synonyms: DAP12-associating lectin 1;MDL-1;MDL1;CLEC5A;CLECSF5

Protein Construction: Tyr26-Lys188

Species: Human

Expression Host: HEK293 Cells

Accession: Q9NY25-1

Molecular Weight: 46 kDa (predicted). Due to glycosylation, the protein migrates to 63-70 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity: Immobilized Human MDL-1, hFc Tag at 2μg/ml (100μl/well) on the plate. Dose response curve for Biotinylated Anti-MDL-1 Antibody, hFc Tag with the EC50 of 17.4ng/ml determined by ELISA.

Purity: > 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC

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, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

In C. elegans, increased lifespan in daf-2 insulin/IGF-1 receptor mutants is accompanied by up-regulation of the MDL-1 Mad basic helix-loop-helix leucine zipper transcription factor.MDL-1, like its mammalian orthologs, is an inhibitor of cell proliferation and growth that slows progression of an age-related pathology in C. elegans (uterine tumors). In addition, intestine-limited rescue of mdl-1 increased lifespan but not to wild type levels. Thus, mdl-1

likely acts both in the intestine and the germline to influence age-related mortality.

Reference

Riesen M, et al. MDL-1, a growth- and tumor-suppressor, slows aging and prevents germline hyperplasia and hypertrophy in C. elegans. Aging (Albany NY). 2014 Feb;6(2):98-117. doi: 10.18632/aging.100638. PMID: 24531613; PMCID: PMC3969279.