

## MDL-1/CLEC5A Protein, Mouse, Recombinant (hFc)

### General Information

Synonyms:	MDL1;DAP12-associating lectin 1;MDL-1;CLEC5A;CLECSF5
Protein Construction:	Tyr26-Lys190
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q9R007-1
Molecular Weight:	46.2 kDa (predicted). Due to glycosylation, the protein migrates to 64-68 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Activity has not been tested. 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 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.

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