

Synonym

MR1 & B2M

Source

Biotinylated Human MR1&B2M Complex Protein(MRM-H82W5) is expressed from human 293 cells (HEK293). It contains AA Arg 23 - Met 302 (Accession # [Q95460-1](#) (MR1) & [P61769-1](#) (B2M)).
Predicted N-terminus: Arg 23 & Ile 21

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).
The protein has a calculated MW of 36.3 kDa and 11.7 kDa. The protein migrates as 42-45 kDa and 13 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Purity

>95% as determined by SDS-PAGE.
>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.
Contact us for customized product form or formulation.

Reconstitution

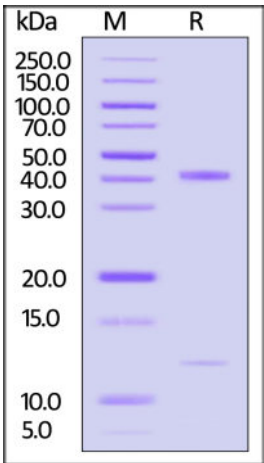
Please see Certificate of Analysis for specific instructions.
For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.
Please avoid repeated freeze-thaw cycles.
This product is stable after storage at:

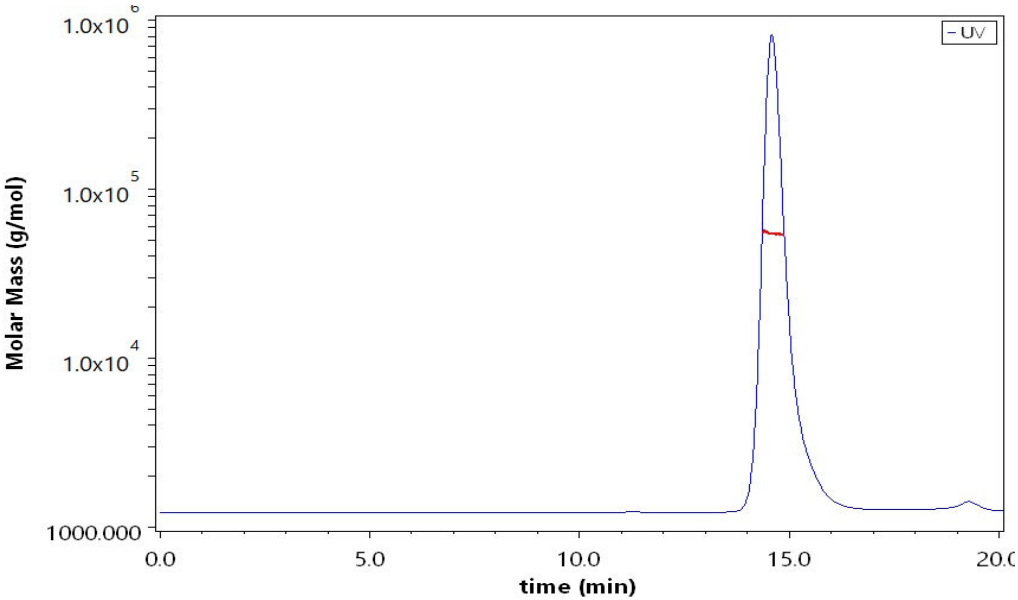
- 20°C to -70°C for 12 months in lyophilized state;
- 70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Biotinylated Human MR1&B2M Complex Protein on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS



The purity of Biotinylated Human MR1&B2M Complex Protein (Cat. No. MRM-H82W5) is more than 90% and the molecular weight of this protein is around 50-65 kDa verified by SEC-MALS.
[Report](#)





Background

MR1 is also known as MHC class I-related gene protein. Antigen-presenting molecule specialized in displaying microbial pyrimidine-based metabolites to alpha-beta T cell receptors (TCR) on innate-type mucosal-associated invariant T (MAIT) cells. In complex with B2M preferentially presents riboflavin-derived metabolites to semi-invariant TRAV1-2 TCRs on MAIT cells, guiding immune surveillance of the microbial metabolome at mucosal epithelial barriers. Signature pyrimidine-based microbial antigens are generated via non-enzymatic condensation of metabolite intermediates of the riboflavin pathway with by-products arising from other metabolic pathways such as glycolysis. Typical potent antigenic metabolites are 5-(2-oxoethylideneamino)-6-D-ribitylaminouracil (5-OE-RU) and 5-(2-oxopropylideneamino)-6-D-ribitylaminouracil (5-OP-RU), products of condensation of 5-amino-6-D-ribitylaminouracil (5-A-RU) with glyoxal or methylglyoxal by-products, respectively.

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and more!

