

HLA-A\*02:01&B2M&CMV pp65 (NLVPMVATV) Monomer Protein, Human, MHC (E. coli, His & Avi),

## General Information

Synonyms: NLVPMVATV;CMVpp65  
Protein Construction: Gly25-Thr305 (HLA-A\*02:01), Ile21-Met119 (B2M) and NLVPMVATV peptide  
Species: Human  
Expression Host: E. coli  
Accession: A0A140T913(HLA-A\*02:01)&P61769(B2M)&NLVPMVATV  
Molecular Weight: 35.6 kDa (HLA-A\*02:01) and 11.9 kDa (B2M)

## QC Testing

Biological Activity: Immobilized Biotinylated HLA-A\*02:01&B2M&CMV pp65 (NLVPMVATV) Monomer, His Tag at 1 µg/ml(100 µl/well) on the streptavidin precoated plate (5 µg/ml). Dose response curve for Anti-B2M Antibody, mFc Tag with the EC50 of 12.1 ng/ml determined by ELISA.  
Purity: > 95% as determined by Bis-Tris PAGE; > 95% as determined by HPLC  
Endotoxin: < 1 EU/µg of the protein as determined by the LAL method.  
Formulation: Lyophilized from 0.22 µm filtered solution in 20 mM Tris, 200 mM NaCl (pH 8.0). Normally 8% mannitol is added as protectant 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

Human cytomegalovirus (CMV), a β-herpes virus with a double-stranded DNA, infects a wide variety of cells and establishes latency in the host. CMVpp65, a tegument protein of the herpes virus CMV, is the main viral antigen found in peripheral blood mononuclear cells (PBMCs) after viral infection and may activate cell-mediated

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immunity, accounting for 70-90% of the cytotoxic CD8+ T cells' (CTLs) response to CMV. Among the pp65-derived CTL epitope peptides, the 9-mer peptide 495NLVPMVATV503 (CMVpp65 495-503 peptide) is the most immunogenic T cell epitope predominantly displayed on HLA-A\*02:01, the most common MHC-I allele in the population.

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