# Data Sheet (Cat.No.TMPK-01412)

TargetMol

## HLA-B*15:01&B2M&SARS-CoV-2 epitope (NQKLIANQF) Monomer Protein, Human, MHC (His & Avi)

### General Information

Synonyms: SARS-CoV-2 epitope;MHC

Protein Construction: Gly21-Thr301(HLA-B*15:01), Ile21-Met119(B2M) and NQKLIANQF peptide

Species: Human

Expression Host: HEK293 Cells

Accession: AAA53258.1(HLA-B*15:01)&P61769(B2M)&NQKLIANQF

Molecular Weight: The protein has a predicted MW of 50.50 kDa. Due to glycosylation, the protein migrates to 52-68 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:

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

HLA-B*15:01 is strongly associated with asymptomatic infection with SARS-CoV-2 and is likely to be involved in the mechanism underlying early viral clearance. T cells from pre-pandemic individuals carrying HLA-B*15:01 were reactive to the immunodominant SARS-CoV-2 S-derived peptide NQKLIANQF, and 100% of the reactive cells displayed memory phenotype.

Reference

Augusto DG, et al. A common allele of HLA mediates asymptomatic SARS-CoV-2 infection. medRxiv [Preprint]. 2022 Oct 12:2021.05.13.21257065.

Augusto DG, Hollenbach JA. HLA variation and antigen presentation in COVID-19 and SARS-CoV-2 infection. Curr Opin Immunol. 2022 Jun;76:102178.



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