Data Sheet (Cat.No.TMPK-01552)

TargetMol

HLA-A*02:01&B2M&P53 R175H (HMTEVVRHC) Monomer Protein, Human, MHC (His & Avi),

General Information

Synonyms:	TP53;TRP53;HLA-A;MHC;Antigen NY-CO-13;BCC7;LFS1;P53;FLJ92943
Protein Construction:	Gly25-Thr305(HLA-A*02:01),Ile21-Met119(B2M) and HMTEVVRHC peptide
Species:	Human
Expression Host:	HEK293 Cells
Accession:	A0A140T913(HLA-A*02:01)&P61769(B2M)&HMTEVVRHC
Molecular Weight:	The protein has a predicted MW of 50.5 kDa. Due to glycosylation, the protein migrates to 55-60 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Anti-HLA-A*02:01&B2M&P53 R175H (HMTEVVRHC) Antibody, hFc Tag at 5μg/ml (100μl/well) on the plate. Dose response curve for Biotinylated Human HLA-A*02:01&B2M&P53 R175H (HMTEVVRHC) Monomer , His Tag with the EC50 of 1.6μg/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, 100 mM L-arginine (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

p53 is a tumor suppressor protein. Under stressful conditions, p53 tightly regulates cell growth by promoting apoptosis and DNA repair. When p53 becomes mutated, it loses its function, resulting in abnormal cell

proliferation and tumor progression. Depending on the p53 mutation, it has been shown to form aggregates leading to negative gain of function of the protein.p53 mutant associated aggregation has been observed in several cancer tissues and has been shown to promote tumor growth.

Reference

Kanapathipillai M. Treating p53 Mutant Aggregation-Associated Cancer. Cancers (Basel). 2018 May 23;10(6):154. doi: 10.3390/cancers10060154. PMID: 29789497; PMCID: PMC6025594.