

HLA-A\*02:01&B2M&MAGE-A4 or MAGE-A8 (KVLEHVVRV) Monomer Protein, Human, MHC (His &

## General Information

**Synonyms:** MAGE-A4 or MAGE-A8;MAGE-A8;MAGE-A4

**Protein Construction:** Gly25-Thr305(HLA-A\*02:01), Ile21-Met119(B2M) and KVLEHVVRV peptide

**Species:** Human

**Expression Host:** HEK293 Cells

**Accession:** A0A140T913(HLA-A\*02:01)&P61769(B2M)&KVLEHVVRV

**Molecular Weight:** The protein has a predicted MW of 50.50 kDa. Due to glycosylation, the protein migrates to 52-62 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

MAGE-A4 and MAGE-A8 are type I members of the melanoma associated antigen (MAGE) family. The MAGE family is a large, highly conserved group of proteins that share a common MAGE homology domain. Both MAGE-A4 and MAGE-A8 antigen-presenting peptides can be presented by HLA-A\*02:01.

### Reference

Weon JL, Potts PR. The MAGE protein family and cancer. *Curr Opin Cell Biol.* 2015 Dec;37:1-8. doi: 10.1016/j.ceb.2015.08.002. Epub 2015 Sep 3. PMID: 26342994; PMCID: PMC4688208.

Bar-Haim E, et al. MAGE-A8 overexpression in transitional cell carcinoma of the bladder: identification of two tumour-associated antigen peptides. *Br J Cancer.* 2004 Jul 19;91(2):398-407. doi: 10.1038/sj.bjc.6601968. PMID: 15213716; PMCID: PMC2409814.

Davari K, et al. Development of a CD8 co-receptor independent T-cell receptor specific for tumor-associated antigen MAGE-A4 for next generation T-cell-based immunotherapy. *J Immunother Cancer.* 2021 Mar;9(3):e002035. doi: 10.1136/jitc-2020-002035. PMID: 33771892; PMCID: PMC7996660.

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