

HLA-A*11:01&B2M&KRAS G12D (VVVGADGVGK) Tetramer Protein, Human, MHC (His & Avi)

General Information

Synonyms:	K-RAS2A;K-RAS4B;KI-RAS;RALD;C-K-RAS;RASK2;NS;MHC;NS3;K-RAS4A;GTPase Kras;K-Ras 2;CFC2;KRAS1;K-RAS2B;KRAS;KRAS2
Protein Construction:	Gly25-Thr305(HLA-A*11:01),Ile21-Met119(B2M) and VVVGADGVGK peptide. Tetramer is assembled by biotinylated monomer and streptavidin.
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAV53343.1(HLA-A*11:01)&P61769(B2M)&VVVGADGVGK
Molecular Weight:	The protein has a predicted MW of 258 kDa. Due to glycosylation, the protein migrates to 260-265 kDa under Non reducing (N) condition based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized HLA-A*11:01&B2M&KRAS G12D (VVVGADGVGK) TCR at 1µg/ml (100µl/well) on the plate. Dose response curve for Human HLA-A*11:01&B2M&KRAS G12D (VVVGADGVGK) Tetramer, His Tag with the EC50 of 51.5ng/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 (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. <small>Actual storage temperature shall be subject to the COA.</small>

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Kirsten rat sarcoma 2 viral oncogene homolog (KRAS) is the most commonly mutated oncogene in human cancer. The developments of many cancers depend on sustained expression and signaling of KRAS, which makes KRAS a high-priority therapeutic target. The virtual screening approach to discover novel KRAS inhibitors and synthetic lethality interactors of KRAS are discussed in detail.

Reference

Wu HZ, et al. KRAS: A Promising Therapeutic Target for Cancer Treatment. Curr Top Med Chem. 2019;19(23):2081-2097. doi: 10.2174/1568026619666190905164144. PMID: 31486755.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481