

HLA-A*0301 KRAS WT Tetramer Protein, Human (HEK293, His-Avi)

Cat. No.:	HY-P77791
Synonyms:	MHC; KRAS; K-Ras 2; KRAS2; C-K-RAS; CFC2; K-RAS2A; K-RAS2B; K-RAS4A; K-RAS4B; KRAS1; KRAS2; NS; NS3; RASK2; GTPase Kras; KI-RAS; RALD
Species:	Human
Source:	HEK293
Accession:	NP_002107.3 (G25-T305)&P61769 (I21-M119)&VVGAGGVGK
Gene ID:	3105&567
Molecular Weight:	260-265 kDa

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p>HLA-A*0301, a critical antigen-presenting major histocompatibility complex class I (MHCI) molecule, collaborates with B2M/beta 2 microglobulin to predominantly display viral and tumor-derived peptides on antigen-presenting cells. This presentation allows recognition by alpha-beta T cell receptor (TCR) on HLA-A-restricted CD8-positive T cells, thereby guiding antigen-specific T cell immune responses to eliminate infected or transformed cells. Additionally, HLA-A*0301 may present self-peptides derived from the signal sequence of secreted or membrane proteins, although T cells specific for these peptides are typically inactivated to prevent autoreactivity. The recognition of both the peptide and the MHC molecule by TCR underscores the fine specificity of antigen recognition, with the peptide responsible for this specificity and MHC residues accounting for the MHC restriction of T cells. HLA-A*0301 typically presents intracellular peptide antigens of 8 to 13 amino acids resulting from cytosolic proteolysis via IFNG-induced immunoproteasome or via endopeptidase IDE/insulin-degrading enzyme. It can bind different peptides containing allele-specific binding motifs primarily defined by anchor residues at positions 2 and 9. Notably, specific alleles, such as A*01:01 and A*03:01, present a restricted repertoire of peptides, including viral and tumor epitopes, each characterized by distinct motifs and anchors.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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