HLA-C*0304 KRAS G12D Complex Protein, Human (Biotinylated, GADGVGKSAL, HEK293, His-Avi)

Cat. No.:	HY-P701086
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:	QAV56463.1 (G25-T305)&P61769 (I21-M119)&GADGVGKSAL
Gene ID:	/&567
Molecular Weight:	55-65 kDa

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	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	HLA-C*0304, an antigen-presenting major histocompatibility complex class I (MHCI) molecule, plays a pivotal role in reproduction and antiviral immunity. In association with B2M/beta 2 microglobulin, it exhibits a specific range of self and viral peptides, serving as a dominant ligand for both inhibitory and activating killer immunoglobulin receptors (KIRs) on NK cells. Particularly crucial in an allogeneic context, such as during pregnancy, HLA-C*0304 facilitates the interaction between extravillous trophoblasts and uterine NK cells expressing KIRs, regulating trophoblast invasion essential for placentation and overall fetal growth. During viral infections, HLA-C*0304 may present viral peptides with low affinity for KIRs, disrupting KIR-mediated inhibition through peptide antagonism and promoting the lysis of infected cells. In the realm of adaptive immunity, HLA-C*0304 presents a restricted repertoire of viral peptides to CD8-positive T cells, enabling antigen-specific T cell immune responses against infected cells, particularly in chronic viral infections like HIV-1 or CMV. The binding of peptides with allele-specific motifs, defined by anchor residues at positions 2 and 9, showcases HLA-C*0304's ability to recognize diverse peptide antigens arising from cytosolic proteolysis via the proteasome. The peptide's fine specificity for antigen recognition and MHC residues accounting for T cell MHC restriction collectively contribute to HLA-C*0304's role in immune surveillance.

Caution: Product has not been fully validated for medical applications. For research use only.

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