

HCK Protein, Human (Sf9, His)

Cat. No.:	HY-P701692
Synonyms:	HCK; Tyrosine-protein kinase HCK; Hematopoietic cell kinase; Hemopoietic cell kinase; p59-HCK/p60-HCK; p59Hck; p61Hck
Species:	Human
Source:	Sf9 insect cells
Accession:	P08631 (I81-P526)
Gene ID:	3055
Molecular Weight:	Approximately 53.4 kDa

PROPERTIES

Appearance	Solution
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
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	HCK Protein, a non-receptor tyrosine-protein kinase predominantly found in hematopoietic cells, serves as a pivotal mediator transmitting signals from various cell surface receptors and playing a crucial role in the regulation of innate immune responses. It intricately modulates functions in neutrophils, monocytes, macrophages, and mast cells, influencing processes such as phagocytosis, cell survival, proliferation, adhesion, and migration. Acting downstream of receptors including FCGR1A, FCGR2A, CSF3R, PLAUR, IFNG, IL2, IL6, IL8, and integrins ITGB1 and ITGB2, HCK orchestrates critical events during the phagocytic process, including mobilization of secretory lysosomes, degranulation, and activation of NADPH oxidase, leading to the respiratory burst and release of inflammatory molecules. Additionally, HCK promotes the reorganization of the actin cytoskeleton, actin polymerization, formation of podosomes, and cell protrusions. It inhibits TP73-mediated transcription activation and apoptosis while phosphorylating key signaling proteins such as CBL, ADAM15, BCR, ELMO1, FCGR2A, GAB1, GAB2, RAPGEF1, STAT5B, TP73, VAV1, and WAS, highlighting its extensive involvement in diverse cellular pathways.
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Caution: Product has not been fully validated for medical applications. For research use only.

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