

MDK/Midkine Protein, Human (Biotinylated, His-Avi)

Cat. No.:	HY-P701024
Synonyms:	MK; ARAP; MDK; MEK; MK1; MKARAP; NEGF2
Species:	Human
Source:	E. coli
Accession:	P21741-1 (V21-D143)
Gene ID:	4192
Molecular Weight:	16.46 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.
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>Midkine (MDK) is a secreted protein that serves as a multifunctional cytokine and growth factor, transmitting signals through cell-surface proteoglycan and non-proteoglycan receptors. Engaging in various physiological processes, MDK regulates inflammatory responses, cell proliferation, adhesion, growth, survival, tissue regeneration, differentiation, and migration. It plays a crucial role in inflammatory processes by mediating the recruitment of neutrophils and macrophages to inflammation sites, exhibiting dual activities that include promoting epithelial cell survival and facilitating smooth muscle cell migration following renal and vessel damage. Moreover, MDK suppresses the development of tolerogenic dendritic cells, inhibiting regulatory T cell differentiation and promoting T cell expansion through NFAT signaling and Th1 cell differentiation. MDK's involvement extends to tissue regeneration, contributing to heart damage recovery by negatively regulating inflammatory cell recruitment and mediating cell survival through MAPKs and AKT pathways, along with facilitating liver regeneration, bone repair, and brain development. Interactions with various receptors, such as PTPRZ1, ITGA4:ITGB1 complex, LRP1, and GPC2, underscore MDK's intricate regulatory role in diverse physiological processes.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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