ARG70366
Human Midkine recombinant protein (Active) (Tag free)

Package: 50 µg
Store at: -20°C

Summary

Product Description	E. coli expressed Active Human Midkine recombinant protein
Tested Reactivity	Hu
Predict Reactivity	Ms, Pig, Shark
Tested Application	FuncSt, SDS-PAGE
Target Name	Midkine
Species	Human
A.A. Sequence	VAKKK DKVKK GGPGS ECAEW AWGPC TPSSK DCGVG FREGT CGAQT QRIRC RVPCN WKKEF GADCK YKFEN WGACD GGTGT KVRQG TLKKA RYNAQ CQETI RVTKP CTPKT KAKAK AKKGK GKD
Expression System	E. coli
Activity	Active
Activity Note	Determined by its ability to chemoattract human neutrophils using a concentration range of 0.1-10.0 ng/ml.
Alternate Names	MDK; Midkine; MK; ARAP; NEGF2; MK1; Amphiregulin-associated protein; Midgestation and kidney protein; Neurite outgrowth-promoting factor 2; Neurite outgrowth-promoting protein

Application Instructions

Observed Size	13.4 kDa

Properties

Form	Powder
Purification	Affinity purified.
Purity	≥ 98% by SDS-PAGE gel and HPLC analyses
Storage instruction	For long term, lyophilized protein should be stored at -20°C or -80°C. After reconstitution, aliquot and store at -20°C or -80°C for up to one month. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	MDK
Gene Full Name	midkine
Background	This gene encodes a member of a small family of secreted growth factors that binds heparin and responds to retinoic acid. The encoded protein promotes cell growth, migration, and angiogenesis, in particular during tumorigenesis. This gene has been targeted as a therapeutic for a variety of different disorders. Alternatively spliced transcript variants encoding multiple isoforms have been observed.

	[provided by RefSeq, Jul 2012]
Function	Secreted protein that functions as cytokine and growth factor and mediates its signal through cell-surface proteoglycan and non-proteoglycan receptors. Binds cell-surface proteoglycan receptors via their chondroitin sulfate (CS) groups. Thereby regulates many processes like inflammatory response, cell proliferation, cell adhesion, cell growth, cell survival, tissue regeneration, cell differentiation and cell migration. Participates in inflammatory processes by exerting two different activities. Firstly, mediates neutrophils and macrophages recruitment to the sites of inflammation both by direct action by cooperating namely with ITGB2 via LRP1 and by inducing chemokine expression. This inflammation can be accompanied by epithelial cell survival and smooth muscle cell migration after renal and vessel damage, respectively. Secondly, suppresses the development of tolerogenic dendric cells thereby inhibiting the differentiation of regulatory T cells and also promoting T cell expansion through NFAT signaling and Th1 cell differentiation. Promotes tissue regeneration after injury or trauma. After heart damage negatively regulates the recruitment of inflammatory cells and mediates cell survival through activation of anti-apoptotic signaling pathways via MAPKs and AKT pathways through the activation of angiogenesis (By similarity). [Provide by uniprot]
Calculated Mw	15.6 kDa (full-length). 13.4 kDa (mature)
PTM	Disulfide bond
Cellular Localization	Secreted