

## Recombinant Human MDK protein

Cat. No. MDK-538H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human MDK protein was expressed in Escherichia coli.

**Species** Human

**Source** E.coli

**ProteinLength** 123

**Description**

Midkine, also named MK, MK1, NEGF 2, is belonging to the neurotrophic and developmentally-regulated heparin-binding molecules family. It is encoded by the MDK gene. The Midkine protein includes five intrachain disulfide bonds which hold two domains and there are three antiparallel beta-sheets in each domain. A chondroitin sulfate proteoglycan, protein-tyrosine phosphatase zeta (PTPzeta), is a receptor for MK. MK promotes the growth, survival, and migration of various cells, and plays roles in neurogenesis and epithelial mesenchymal interactions during organogenesis. The predicted molecular weight is approximately 13.3 kDa, based on a mature peptide length of 118 amino acid residues in the mouse and 121 amino acid residues in the human. Across species, MK shows 87 % identity between the human and murine proteins.

**Form** Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH7.4.

**Bio-activity**

Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using human neutrophils is in a concentration range of 0.1-10 ng/ml.

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<b>Molecular Mass</b>	Approximately 13.4 kDa, a single non-glycosylated polypeptide chain containing 123 amino acids.
<b>AA Sequence</b>	VAKKKDKVKKGGPGSECAEWAWGPCTPSSKDCGVGFREGTCGAQTQRIRCRVPC NWKKEFGADCKYKFENWGACDGGTGTKVRQGTLKKARYNAQCQETIRVTKPCTPK TKAKAKAKKGGKGD
<b>Endotoxin</b>	Less than 1 EU/μg of rHuMidkine as determined by LAL method.
<b>Purity</b>	>97% by SDS-PAGE and HPLC analysis.
<b>Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions.

## GENE INFORMATION

<b>Gene Name</b>	MDK
<b>Official Symbol</b>	MDK
<b>Synonyms</b>	MDK; midkine (neurite growth-promoting factor 2); NEGF2; midkine; FLJ27379; MK; ARAP; amphiregulin-associated protein; midgestation and kidney protein; neurite outgrowth-promoting protein; neurite outgrowth-promoting factor 2;

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**Gene ID** 4192

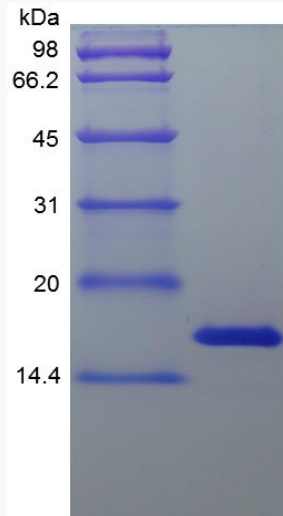
**mRNA Refseq** NM\_001012333

**Protein Refseq** NP\_001012333

**MIM** 162096

**UniProt ID** P21741

**SDS-PAGE of MDK-538H**



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